EXPLORING AN ISLAMIC STUDENT HOUSING FRAMEWORK IN SEMARANG, INDONESIA

MUHAMMAD ISMAIL HASAN

FACULTY OF BUILT ENVIRONMENT
UNIVERSITI MALAYA
KUALA LUMPUR

2024

EXPLORING AN ISLAMIC STUDENT HOUSING
FRAMEWORK IN SEMARANG, INDONESIA

MUHAMMAD ISMAIL HASAN

THESIS SUBMITTED IN FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY/ARCHITECTURE

FACULTY OF BUILT ENVIRONMENT
UNIVERSITI MALAYA
KUALA LUMPUR

2024

UNIVERSITY MALAYA
ORIGINAL LITERARY WORK DECLARATION

Name of Candidate: Muhammad Ismail Hasan
Registration / Matric No.: BVA190016 and 17207750
Name of Degree: Doctor of Philosophy (Architecture)
Title of Research Report:

EXPLORING AN ISLAMIC STDENT HOUSING FRAMEWORK IN SEMARANG, INDONESIA
IN SEMARANG, INDONESIA

Field of Study:

Do solemnly and sincerely declare that:

(1) I am the sole author / writer of this Work;
(2) This Work is Original;
(3) Any use of any Work in which copyright exists was done by way of fair dealing and for permitted purpose and any except extract from, or reference to or reproduction of any copyright work has been disclosed expressly and sufficiently and the little of the work and its authorship have been acknowledge in this Work;
(4) I do not have any actual knowledge nor do I ought reasonably to know that the making of this work constitutes an infringement of any copyright work.
(5) I hereby assign all and every right in the copyright to this Work to the University of Malaya ("UM"), who henceforth shall be owner of the copyright in this Work and that any reproduction or use in any form or by any means whatsoever in prohibited without the written consent of UM having been first had and obtained;
(6) I am fully aware that is in the course of making this Work I have infringed any copyright whether intentionally or otherwise, I may be subject to legal action or any other action as may be determined by UM.

Muhammad Ismail Hasan Date: 15th December , 2024
Candidate's Signature

Subscribed and solemnly declared before,

.... Date:13/12/2024   .... Date:
Witness's Signature   Witness's Signature

ABSTRACT

This study aims to reveal the Islamic value of Islamic Student Housing (ISH) in Semarang, Indonesia. This study investigates how Islamic university students dwelling in student housing conduct their daily activities. The goal is to develop a design framework for creating ISH design that include Islamic values. This study utilized constructivism grounded theory with a FGD and observation method. The collected data is then visualized to create a spatial representation of space use. According to the findings of this study, three factors must be considered while creating user-based ISH: privacy, sociability and orientation. These three aspects allow for an ISH design that prioritizes typology while putting the user first. Furthermore, the study's findings point to the presence of an ISH spatial planning system that takes into account both external and internal relationships. Spatial configurations that considering the interaction between space and interior have the potential to create an ISH space system based on Islamic values.

Keywords: Islamic Student Housing, Islamic architecture, design framework, privacy, hospitality, orientation

ABSTRAK

Kajian ini bertujuan untuk mendedahkan nilai Islam Perumahan Pelajar Islam (ISH) di Semarang, Indonesia. Kajian ini menyiasat bagaimana pelajar universiti Islam yang tinggal di perumahan pelajar menjalankan aktiviti harian mereka. Matlamatnya adalah untuk membangunkan rangka kerja reka bentuk untuk mencipta reka bentuk ISH yang merangkumi nilai-nilai Islam. Kajian ini menggunakan teori berasaskan konstruktivisme dengan kaedah FGD dan pemerhatian. Data yang dikumpul kemudiannya divisualisasikan untuk mencipta perwakilan spatial penggunaan ruang. Menurut penemuan kajian ini, tiga faktor mesti dipertimbangkan semasa mencipta ISH berasaskan pengguna: privasi, kemasyarakatan dan orientasi. Ketiga-tiga aspek ini membolehkan reka bentuk ISH yang mengutamakan tipologi sambil mendahulukan pengguna. Tambahan pula, dapatan kajian menunjukkan kehadiran sistem perancangan spatial ISH yang mengambil kira hubungan luaran dan dalaman. Konfigurasi ruang yang mempertimbangkan interaksi antara ruang dan pedalaman berpotensi untuk mewujudkan sistem ruang ISH berdasarkan nilai-nilai Islam.

Kata kunci: Perumahan Pelajar Islam, seni bina Islam, rangka kerja reka bentuk, privasi, hospitality, orientasi

ACKNOWLEDGEMENT

TABLE OF CONTENT

LIST OF FIGURES

xvii

LIST OF TABLES

CHAPTER 1 INTRODUCTION

1.1. Research Background

Housing is indisputably an absolute necessity for humans, as it is a requirement of a dwelling. Provisioning of proper housing encourages housing provider to for better dwelling experience. In accordance with that issue, demand of housing growing rapidly every year. Hence, it is homework for both the government and the private sector in providing housing rapidly, affordable, and top-notch quality (Satola et al., 2020) (Abdullahi & Wan Abd Aziz, 2017). Furthermore, residential models' demand somewhat varies from modest to luxury, landed to vertical, and variously in homeownership such as buying or renting. Primarily for rental housing, the need is also increasing for several reasons (Xuan et al., 2020). Commute to work, financial reason, and unpredictable work/study placement and period also affect tenants to choose rent rather than purchase a house (Farraz & Barus, 2019). The rental house itself consists of sundry types, such as public rental housing, privately rented house, worker dormitories, and student housing (Adu-Gyamfi et al., 2020) (Yuan et al., 2017) (Thomsen, 2007) (Smith, 2003). Particularly on student housing, it is interesting to be raised in this study where the demands increase while the supply is short (Sage et al., 2012).

In Indonesia, student housing growth is linear to increasing new student enrolment in public or private universities. Most of the universities' student housings were awarded and built by the Ministry of Public Housing (Kementrian Perumahan Rakyat / Kemenpera), which recently known as Ministry of Public Works and Housing (MPWH) (Kementrian Pekerjaan Umum dan Perumahan Rakyat/ KemenPUPERA) (Utari et al., 2014) (Swasto, 2018). Provisioning affordable temporary housing for academicians, student housing also provides stone-throw housing from campus (Diningrat Khan & Wulandari, 2017). Furthermore, MPWH also focuses on provisioning student housing

for religious institutions, 800 towers of student housing built during 2015-2019 prove the contribution of MPWH to cultivate religious students (PUPR, 2020).

Universities arguably active agents of change for students to fosters their behaviour and virtuous before applied in the community (Nuriman & Fauzan, 2017) (Stephens et al., 2008). University students' character and behaviour are usually being formed and applied in all campus areas, particularly in student housing, where students spend most of their time during their university time. Student housing is critical to achieving students' academic goals (Reynolds, 2020), behaviour, and even social (Brown et al., 2019). Hence quality assessment of student housing is immensely needed to achieve those goals (N. M. Najib et al., 2018)(N. U. M. Najib et al., 2015). Ministry of Public Works and Housings Indonesia committed to provide numerous numbers of student housings to universities spread along the nation to provide a proper facility for students. The demands of student housings remain increasing in line with the increasing number of university students. Hence, student housing is considered a vital facility for universities. Considering the importance of student housing quality, an Islamic university should notice the applications of Islamic architecture on its student housing. The proper application of Islamic architecture will encourage students to implement Islamic values during their dwell (Mustafa et al., 2018) . The implementation of Islamic architecture is significantly required to Islamic student housing, particularly in Islamic Universities. Thus, the implementation of Islamic architecture in student housing is required to generate a holistic applicable Islamic value student housing.

Researchers attempted to evaluate student housing in several point of focuses. Post-Occupancy Evaluation (POE) is a most researched topic regarding student housing. Research about POE in student housing is useful for planners, designers or facility managers to obtain feedback from previous occupants about their satisfaction and to asses

29

the building performance (Hassanain, 2007) (Sanni-Anibire & Hassanain, 2016). Research in POE is general and universal applicable to whole student housings, either in public or private university, Islamic or non-Islamic university. Furthermore, in specific student housing in Islamic institution or university in Islamic country researches were conducted regarding spatial preferences (Daliri Dizaj & Khanghahi, 2022) and health among occupants (Karim et al., 2007). Whereas in Indonesia which has numerous Islamic-based institutional, research regarding issues of student housing are more vibrant comprises culture, education, health and spatial. The culture themed research about student housing investigate about multiculturalism and diversity (Latif & Hafid, 2021), while education themed researches were more about curriculum and leadership tought (Humaisi et al., 2019; Thahir, 2014). In the realm of health research of student housing, it studied skin disease among occupants (Arisandi et al., 2018), while spatiality in the research of Islamic student housings investigated about privacy requirement, green building concept, and spatial arrangements to promote togetherness (Bakri, 2021; Firmansyah et al., 2021a; Mubarok et al., 2018).

Holistically, it is lack of research about the implementation of Islamic values wholly in Islamic student housing. Furthermore Islamic architecture is a complete concept that promotes those two factors and another good value derived from the Al Quran and sunnah (Othman et al., 2015). Hence, Islamic architecture concept is necessarily applied to student housing in Islamic universities and acceptable to be applied in student housing in non-Islamic universities because it is universal (Omer, 2019). However, the implementation of Islamic value in Islamic universities of Indonesia should consider the housing values. Study about housing value investigates actors' everyday practices are inseparable from their culture, activities, and spatial arrangement (Atmodiwirjo & Yatmo,

30

2021). The values establish not only a physical but also a cultural routine activity perspective from which spatial characteristics emerge (Yatmo & Atmodiwirjo, 2013).

In addition, Indonesia has the largest Muslim population in the world, as well as a growing number of Islamic higher education institutions and students. According to data from Statistics Indonesia, the number of Islamic higher education institutions and students is on the rise. This demonstrates that the existence of Islamic institutions is promising and will continue to grow in the years to come. Figure 1.1 depicts the rise in Islamic higher education institutions and students. However, it faces a shortage of Islamic student housing, and the provisioning of such housing has become an urgent matter.
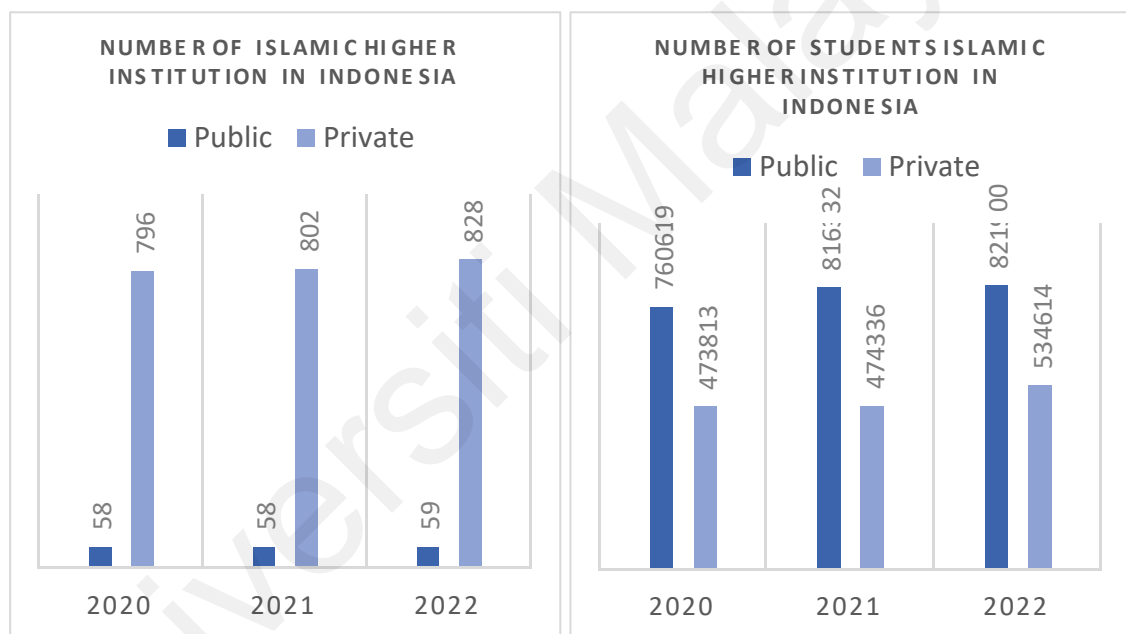
Figure 1.1 The increasing number of Islamic higher institutions and the students

1.2. Problem Statement

As the provider and builder of the majority of student housing in Indonesian universities, the Ministry of Public Works and Housings (MPWH) confirms that there is no consideration of Islamic values in the design of student housing at Islamic universities. It is bolstered by a statement from a member of the MPWH's planning division clarifying that Islamic values are not taken into account during the development of student housing

31

at an Islamic university. Strongly required is research on Islamic architecture for multi-story buildings, with student housing as an example. MPWH constructed both UNIMUS (Muhammadiyah University of Semarang), a private Islamic university, and UNNES (State University of Semarang), a public university, with identical floor plans. Without appropriate application of Islamic architecture, Islamic Student Housing in Islamic Universities will be treated similarly to Student Housings in Public Universities in terms of design and approach, which will weaken Islamic values in the practises.
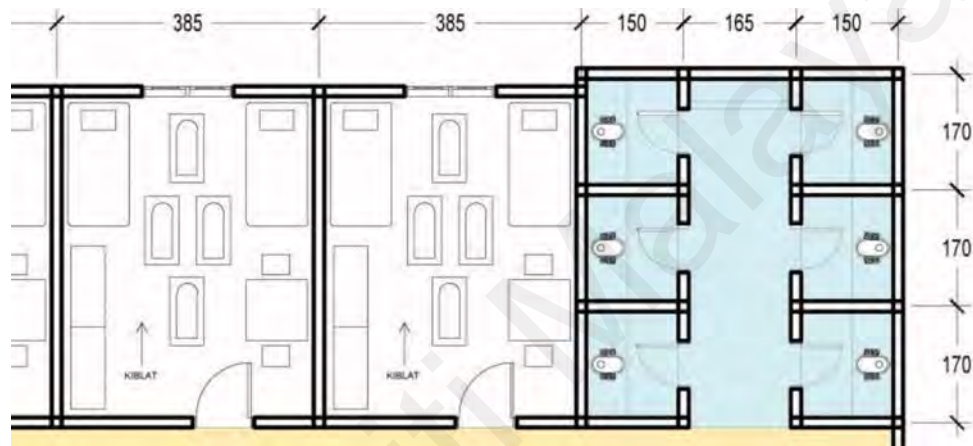
Figure 1.2 Room Layout of UNIMUS
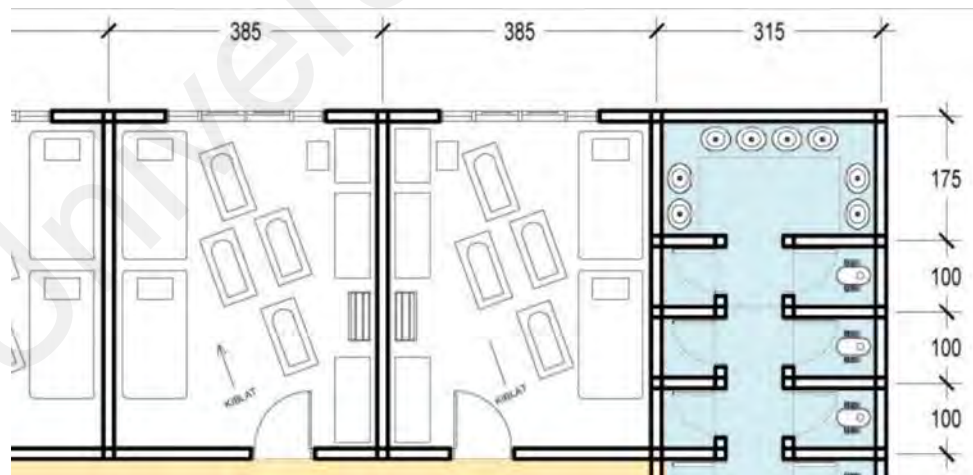
Figure 1.3 Room Layout of UNNES

In fact, the provisioning of student housing in Islamic universities must be enhanced with Islamic architecture to strengthen the Islamic values teaching

32

(Firmansyah, Shaari, et al., 2020). However, Islamic student housing must be aligned with the values of Indonesian architecture; hence, actors' everyday practises are inseparable from their culture, activities, and spatial arrangement (Atmodiwirjo & Yatmo, 2021). The Indonesian housing values establish not only a physical sense of location, but also a cultural understanding based on everyday activities, from which spatial qualities arise (Yatmo & Atmodiwirjo, 2013).

In a private and non-degree Islamic educational education, the evolving discourse on Islamic student housing has been discussed. In contrast, student housing at an Islamic university adopts a modern architectural style to meet the MPWH's strong demand for student housing. Observing MPWH-constructed student housing has the potential to be investigated at Islamic universities in particular. Considering the lack of implementation of Islamic values in their buildings, it would be worthwhile to investigate how to implement Islamic architecture emphasize in current dwelling values. In addition, it is essential to examine the dwelling characteristics of students in Islamic student housing in order for new aspect values of Islamic architecture in ISH to emerge.

1.3. Research Gap

There are a few things to mention and generate as research gap for this study. The absence of Islamic architectural considerations in the design of student housing built by the Indonesian Ministry of Public Works and Housing for Islamic universities necessitates this study. At addition, there is a critical need to study the use of Islamic architecture for Islamic Student Housing (ISH) in Indonesian Islamic universities in order to promote and maximise the learning of Islamic values during students' stays in ISH. Several attempts have been made to make inquiries regarding Islamic student housing in Indonesia, as evidenced by the Scopus-indexed research publications: implementation of

33

Islamic value in boarding school (Bakri, 2021; Firmansyah et al., 2021b; Firmansyah, Ismail, et al., 2020; Firmansyah, Shaari, et al., 2020; A. Kurniawan & Yuli, 2021; Mustafa et al., 2018; Rozan et al., 2014; Sudjak et al., 2017) and building performance (Sedayu, 2019). However, these investigations were done in a boarding school and not an Islamic university. This indicate that it is very limited research regarding Islamic student housing in Islamic universities in Indonesia.

This necessitates an understanding of the diverse perceptions of Islamic architecture with respect to Indonesian housing values that exist among Islamic Student Housing of Islamic Universities in Indonesia. Furthermore, the application of Islamic architecture for ISH should be studied comprehensively with the values of dwelling values derived from the dwellers' everyday activities. Comprehensively, the study for design of ISH in Islamic universities should be enhanced with the study regarding students' everyday activity as the local value for the design.

1.4. Research Aims, Questions, and Objectives

This is the portion that will eventually have an effect on the path that this research takes and the findings that it generates. This section includes the research that will be conducted for the proposed study, including the research aim, research questions, and objectives for the study.

1.4.1. Research Aim

The goal of this study is to develop a new design framework of Islamic Student Housing (ISH) with Islamic architecture values as basic of design approach.

1.4.2. Research Questions

Islamic architecture characteristic is universal which encourage the users to implement the dwelling values aspect to be emerge as the Islamic architecture in future

ISH framework. The prominent dwelling value aspects is everyday activity perspective which arises spatial characteristic. To overcome how is the implementation of locality in ISH, it requires to developed research questions to reveal research problem. Hence, proposed research questions as follow:

1. What is the Islamic housing architecture values with the Indonesian spatial approach in housing?

2. How is the current practices of Islamic architecture in Islamic student housing dwellers of selected research locations?

3. How to develop framework of Islamic student housing in Indonesia using Islamic architecture values as an approach?

1.4.3. Research Objectives

To achieve the research aim: to explore the implementation of Indonesia's Islamic Student Housing emphasizing on locality, that influencing students' staying experience and further propose aspect design of the Islamic Student Housings. The aim can be achieved by identifying the Islamic architecture values in Indonesia, then investigating the practices in the Islamic student housings, and developing the framework from the investigation findings. Research objectives based on the research questions, respectively, are:

1. To identify the Islamic housing architecture values with Indonesian spatial approach in housing,

2. To investigate the current practices of Islamic architecture in Islamic student housing dwellers of selected research location,

3. To develop a framework of Islamic student housing in Indonesia using Islamic architecture values as an approach.

1.5. Research Scope

This section covers the scope of the research topic including limitation to remain on focused research. The study scope is the implementation of Islamic architecture emphasizes in Indonesian housing values with case study in Islamic student housings (ISH). There are two types of Islamic student housings based on the founder, built by The Ministry of Public Works and Housings Indonesia (MPWH) or built by Islamic institutions. Both types of the ISH are employed in this study to provide the variety of data with diverse objects.

1.6. Scientific Contribution

The study proposed some significant contributions to for the future research academically or practically. In academic realm, this study contributes in the research method and theoretically in Islamic architecture. At the same time, the study also contributes to the architectural practices in the development of Islamic student housings. The contributions are expanded as follow:

o   Identification the Islamic architecture values with Indonesian spatial approach in housing,

o   Understanding of the current practices of Islamic architecture among Islamic student housings' occupants of selected research locations,

o   Development of framework for future Islamic student housing in Indonesian Islamic universities.

1.7. Gantt Chart

Table 1.1 Gant Chart

Agenda	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8
Semester		1							2							3					4					5					6					7					8							
Year	2019					2020												2021												2022											2023							
Initial Preparation with Supervisor			■	■	■	■	■																																									
Preparation of Theoretical Framework					■	■	■	■	■	■	■	■	■	■	■	■																																
Proposal defence																	■																															
Pilot project data collection																														■																		
Pilot project writings																																	■	■	■	■	■											
Data collection																																						■	■									
Writing Chapter 1										■	■	■	■																																			
Writing Chapter 2														■	■	■	■	■	■	■	■	■	■	■	■	■	■	■																				
Writing Chapter 3																												■	■																			
Writing Chapter 4																															■	■	■	■	■	■	■	■	■	■	■	■	■					
Writing Chapter 5																																							■	■	■	■	■					
Writing Chapter 6																																									■	■	■					
Writing 1st publication																	■	■	■	■																												
Writing 2nd publication																					■	■	■	■																								
Writing 3rd publication																											■	■	■																			
Candidature defence																																											■					
Thesis seminar																																														■		
Viva voce																																																■

37

1.8. Structure of the Thesis

This comprehensive research report will consist of a number of chapters that will be laid up in a precise sequence to provide the reader with an opportunity to comprehend the aims and contents of the research. The chapters are therefore summarised in the following way:

Chapter 1 Introduction. This chapter presents the introduction, research context, and research gap, as well as past studies completed on the research problem. This part discusses the statement of the problem and gives the aims, purpose, research questions, and framework. In this chapter, the significance of the research is also discussed.

Chapter 2 Literature Review. Central to the chapter is an in-depth literature assessment of historical research and current trends in Islamic architecture, Indonesian architecture locales, and student housing. It shows the geographical values of Indonesian housings to be used as a starting point for collecting data on Islamic student housings.

Chapter 3 Research Methodology. This chapter highlights the detailed methodological step of conducting the research, mainly on Qualitative with Grounded Theory and specifically Constructivism Grounded Theory. This chapter also describes in detail the analysis software and the step-by-step analytical procedure used to produce theoretical saturation.

Chapter 4 Findings. This chapter will emphasise the research findings, including the location and profile of selected universities and Islamic Student Housings. Also included in this chapter is a report of Focus Group Discussions performed at certain universities, with information on participants, location, and timing.

Chapter 5 Discussion. This chapter elaborates on the data analysed using Atlas.ti from the Focus Group Discussion conducted with students regarding the locality values in Islamic Student Housings. The examined data also indicate the codes discovered in the

scripted Focus Group Discussion that link to one other in terms of the relationship between focused coding and other elements of localities.

Chapter 6 Discussion. This chapter summarises the final outcome of Atlas.ti data analysis from four Islamic Student Housings. This chapter will also revisit the theoretical concept in order to summarise the research's findings and originality. Ultimately, this chapter will also offer how is the research findings can be utilised in the future Islamic Student Housings.

Chapter 7 Conclusion and Recommendation. The final section includes a brief summary of the study's findings and some suggestions for the development of Islamic Student Housings. The limitations of this study and suggestions for further research are discussed in the last chapter.

CHAPTER 2 LITERATURE REVIEW

2.1. Islam and The Values

The notion that Islam is the religion with the quickest rate of growth is supported by the fact that there are many reasons why people all over the world readily accept it (Foroutan, 2017). Interracial marriage, engagement with Muslims of one's own ethnicity, and exposure to Islamic customs and practises are some of the elements that contribute to the proliferation of Islamic ideas and new Muslims. (Shestopalets, 2021; Sintang et al., 2011). There is no doubt that the moral teachings of Islam play a vital part in the growth of Islam as a religion and the number of Muslim converts in different parts of the world.

2.1.1. Oneness of God

Islam is a monotheism religion which means only believe in one God, Allah the Almighty. It is believed that there is a superior power which arrange, controls, and manages the universe. Al-Qaradawi in his book (Al-Qaradawy, 1995) has explain the existence of Allah on his book which based on The Quran as the holy book, life guidance for Muslim, Allah as "Lord of the worlds" (1:2); "Lord of the heaven and earth" (18:14); "the Lord of the east and west of what is between them" (26:28); "How can I seek a lord other than God? While He is the Lord of all things?" (6:164). Furthermore, the existence of Allah is proved and demonstrated in the Qur'an in many ways.

First, it calls believers in the law of causation's attention to the universe's signs that testify to His divine existence.

> "Indeed, in the creation of the heavens and the earth; the alternation of the
>
> day and the night; the ships that sail the sea for the benefit of humanity; the
>
> rain sent down by Allah from the skies, reviving the earth after its death; the

scattering of all kinds of creatures throughout; the shifting of the winds; and the clouds drifting between the heavens and the earth—ˈin all of thisˈ are surely signs for people of understanding." (2:164).

For this creation to exist, as well as for this order to be perfect, there must be a creator. "Or were they created by nothing, or are they (their own) creators? Or did they create the heavens and the earth? In fact, they have no firm belief (in Allah)." (52:35-36).

Secondly, man is compelled to intuitively detect the existence of the Mighty and Great God and Lord Allah Who protects and provides for him. This summons the soundness of human faith, which is inherent in all people.

"So be steadfast in faith in all uprightness ˈO Prophetˈ—the natural Way of Allah which He has instilled in ˈallˈ people. Let there be no change in this creation of Allah. That is the Straight Way, but most people do not know." (30:30)

If this pure and solid innate faith is disproved during happy, enjoyable, and prosperous times, it always springs to life during difficult times:

"He is the One Who enables you to travel through land and sea. And it so happens that you are on ships, sailing with a favourable wind, to the passengers' delight. Suddenly, the ships are overcome by a gale wind and those on board are overwhelmed by waves from every side, and they assume they are doomed. They cry out to Allah ˈaloneˈ in sincere devotion, "If You save us from this, we will certainly be grateful." (10:22)

This natural faith also comes to life when a person is unexpectedly queried or wonders about the universe's creation and its origin. The sole response at this point will be the word Allah (God).

"If you ask them (O Prophet) who created the heavens and the earth and subjected the sun and the moon (for your benefit), they will certainly say, "Allah!" How can they then be deluded (from the truth)?" (29:61)

"Ask ˹them, O Prophet˺, "Who provides for you from heaven and earth? Who owns ˹your˺ hearing and sight? Who brings forth the living from the dead and the dead from the living? And who conducts every affair?" They will ˹surely˺ say, "Allah." Say, "Will you not then fear ˹Him˺? That is Allah—your True Lord. So what is beyond the truth except falsehood? How can you then be turned away?" (10:31-32)

Thirdly, The Qur'an uses historical evidence to show that accepting Allah and His messengers has always brought life and prosperity, while rejecting them has always meant loss and destruction. The case of Noah :

"But they rejected him, so We saved him and those with him in the Ark, and drowned those who rejected Our signs. They were certainly a blind people." (7:64)

The case of Hud :

"So We saved him and those with him by Our mercy and uprooted those who denied Our signs. They were not believers." (7:72)

The case of Saleh and his people of the Thamud :

"So their homes are there, (but completely) ruined because of their wrongdoing. Surely in this is a lesson for people of knowledge. And We delivered those who were faithful and were mindful (of Allah)." (27:52-53).

The case of the Messenger Muhammad (PBUH) The Qur'an makes reference to all of these instances and others by saying:

"Indeed, We sent before you ˹O Prophet˺ messengers, each to their own people, and they came to them with clear proofs. Then We inflicted punishment upon those who persisted in wickedness. For it is Our duty to help the believers." (30:47)

The concept of monotheism, the oneness of God in Islam, means Allah is One God without partner whatsoever. As mentioned in the Qur'an

"Say, (O Prophet,) "He is Allah—One (and Indivisible). Allah—the Sustainer (needed by all). He has never had offspring, nor was He born. And there is none comparable to Him." (112:1-4)

The universe's immense beauty and order all serve to demonstrate that there is only one Creator. If there were more than one, complete chaos and anarchy would take the place of order and beauty.

2.1.2. Worship

In his book, Al-Qaradawi (Al-Qaradawy, 1995) illustrates the purpose of worship in Islam. The whole purpose of man's existence is to worship Allah, whose adoration is characterised by complete submission and unwavering love. In Islam, worship is understood to include all facets of religion, the entirety of man, and all of life. The reason why we worship Allah is still a question that some people persistently ask. To put it another way, why does Allah demand that we worship Him while he is not in need of our acts of worship? The definitive response is that Allah does not profit from our worship and does not suffer as a result of our decision to refrain from worshipping. The fact that He is superior to all of things is demonstrated in the Quran through Solomon's words, which read as follows:

"So when Solomon saw it placed before him, he exclaimed, "This is by the grace of my Lord to test me whether I am grateful or ungrateful. And whoever is grateful, it is only for their own good. But whoever is ungrateful, surely my Lord is Self-Sufficient, Most Generous." (27:40)

And another verse of Qur'an illustrates this case :

"O humanity! It is you who stand in need of Allah, but Allah ˹alone˺ is the Self-Sufficient, Praiseworthy." (35:15)

2.1.3. Ethics and Morals

The Islamic beliefs cannot in any way be divorced from the moral and ethical norms that they uphold. It is for this reason that Islam is the religion that is expanding at the quickest rate; the followers of Islam convey the morals and ethics of their faith to the world as a reflection of Islam itself. In his book, "Al-Qaradawi," published in 1995 by Al-Qaradawy, Al-Qaradawi explains the Islamic perspective on ethics and morality. Creed, forms of worship, dealing, and morality are the four categories that are typically used by Islamic scholars to divide Islam into divisions. The conclusion that the matter of morals is of the least importance should not be drawn at any point. In point of fact, when one studies the Qur'an and the traditions of the Prophet in great depth and with great care, one immediately recognises that Islam is, at its core, a religion of morals and ethics in the most comprehensive and profound manner possible, and that morality is one of Islam's most prominent general characteristics.

The concern that Islamic principles have with morals and good conduct is so significant that the Qur'an does not find a greater characteristic in the Messenger of Allah to praise:

"And you are truly ˹a man˺ of outstanding character." (68:4)

In a few concise words, the Prophet of Islam (PBUH) summed up the teachings of Islam when he said, "I was primarily sent by Allah to complete (the divine system of) good conduct and morals." This statement is considered to be a summary of the Message of Islam. This issue of morality, refined ethics, and rules of good behaviour is an essential component of the Islamic system, including its doctrines, religion, worship, dealings, and even politics and economy in both times of peace and war.

2.2. Islamic Values in Indonesia

Many studies have demonstrated, and it is now common knowledge, that the social, cultural, economic, and moral domains are at the centre of the Islamic ideas that were developed in Indonesia. This was the case since Islam evolved in Indonesia.

2.2.1. Social

The value of social is inseparable in Indonesian society as main character in cultural everyday life. Geographically, Indonesia as an archipelago country consists of thousands Islands which each Island has their own cultures, customs, and traditions. Moreover, those cultures blend each other harmoniously through some activities such as inter-racial marriage. The inter-racial marriage also contributes the spread of Islam and plays a role pluralism around Indonesia (Halim et al., 2021). Undeniably, over the past centuries, inter-marriage significantly contributed to the spread of Islam, mainly from the Arab traders (Michalopoulos et al., 2018). Although inter-racial marriage succeed to spread Islam around Indonesia, the plurality in Indonesia remain preserved. Plurality in Indonesia reach its mature phase where the difference in cultural is already accepted broadly by society (Abdullah, 2017).

Nevertheless, the practices of plurality in Indonesia not only in inter-racial marriage but also in the variety of Islamic organizations. Some Islamic organizations in Indonesia, Nahdlatul Ulama and Muhammadiyah influence the development of Islam as religion and culture. Those leading Islamic organizations also have their own characteristics such as mosque styles with some identities such as colour, ornaments, and equipment and it intended to prevent the conflict in society (Putrie et al., 2020). The existence of actors in Indonesian social life shares a strong influence to Islam culture in Indonesia. Kyai or the leader of *Pondok Pesantren* (traditional Islamic boarding institution) holds a massive influence in socio-religious act. They indirectly develop the Islamic teaching in community and his involvement in everyday social life influence the politics and decision making (Setiyani, 2020). During Covid-19 pandemic, the role of actor *Kyai* and *pesantren* share a form of socio-religious act in responding to Covid-19 prevention (Syarif et al., 2021).

2.2.2. Culture

In Indonesia, cultural practises are inextricably linked to the aforementioned social element. A correlation between social and cultural factors has so far been found in various research, including marriage, religious tradition, and the impact of actors in Pondok Pesantren. Inter-racial marriage develops as Islamic beliefs are adapted from native marital customs and accepted by the Tengger population (Hasyim et al., 2020). Islam's ascent in Indonesia was greatly aided by culture. Islam's capacity for cultural acculturation and adaptation helped it gain popularity quickly. Farmers in East Java have a socioreligious activity known as "wiwitan" that promotes Islamic ideals (Maimun et al., 2020). Another culture that is well preserved in Indonesia emerges as a result of the influence Kyai and Pondok Pesantren had on their pupils and alumni. As a common

occurrence, visiting "Kyai" is one of the cultures that has been kept and cannot be replaced by online da'wah activity (Udin & Hakim, 2020).

2.2.3. Economics

In Indonesia, the economic component of Islamic beliefs is marked by gender equality, which leads to economic activities for women. It was also a thought of Saleh Darat, a former well-known Ulama, that women's economic activity would arise in the furnishing of specific chambers for women's economic activity (Suhandjati & Hadikusuma, 2018). A study shows that gender equality in economic issues can also be found in educational equality, which is in addition to gender equality in economic activities. The provision of Madrasas and other Islamic-based schools with gender equality educational systems became a necessity in Indonesian society in order for parents to give their daughters the opportunity to achieve a good educational background while also improving their understanding of Islamic values (Asrohah et al., 2020). According to the findings of one longitudinal study, another economic factor related to Islamic value in Indonesia is taking into consideration the availability of halal-certified items. The rising popularity of products that have been recognised as halal has a direct correlation to the shopping behaviours of Indonesian Muslims (Sukesi & Akbar Hidayat, 2019).

2.2.4. Moral

The Islamic principles clearly thought that its adherents should engage in moral improvisation from a variety of activities. These activities include education, personal cleanliness, marriage life, and private considerations. The education of their children, preferably in an Islamic-based curriculum school for children like pesantren (Islamic boarding school), has become a primary priority for parents in recent years (Marwazi &

Husnul Abid, 2021). *Pesantren* is an example of a religious institution that teaches pupils Islamic values and also serves as an example of the importance of adhering to various health regulations and procedures in order to successfully carry out worship activities (Syarif et al., 2021). As a result of the requirement that one must fulfil before praying or engaging in any sunnah, cleanliness is regarded as one of the most important parts of Islamic beliefs. A positive influence on health protocol is brought about by the existence of *Pesantren*, which is necessary due to the extraordinary outbreak of Covid-19. So, it was thought that *Pesantren* would disseminate a positive affirmation to the Islamic society in Indonesia in terms of religious life, personal hygiene, and most likely an educational system founded on Islamic principles.

The value of Islamic thought in Indonesia, particularly for women, is essentially the same as the value of Islamic thought spread in other nations. This is especially true in terms of the former. Within the framework of Islam, and more specifically within the Islamic culture of Indonesia, women occupy a unique place. It is important to give particular attention to the roles that women play in their homes from a geographical perspective. In order to ensure that women are able to keep their privacy within a home, it is necessary to provide them with a gender-specific area that meets their needs in terms of safety and comfort. The division of women's and men's areas in a home serves multiple purposes, including the creation of a safe environment and the protection of women's right to personal privacy (Asrohah et al., 2020). This demonstrates that women play an important position in Islamic culture, particularly in Indonesian society. This privileged function wouldn't diminish the standing of women in the family as the more deserving gender, but rather, the role of women gives strength to the institution of the family. In addition, it is understood that women exist to provide support for males in the activities of daily life (Baskara, 2020).

2.3. Islamic Values and Architecture

In Islamic rule, everyday life of a Muslim is subservient to the will of Allah, and He has granted the Muslim with His Book (The Quran) that contains of guidance and rules for Muslim's life. Tradition of Prophet's life (Sunnah) and Hadith also an additional guidance and rules for Muslim. Those Quran, Sunnah, and Hadith known as Sharia, a standard aspect of Muslim everyday life and activity (Mortada, 2003). The completeness of Sharia also covers architecture realm which Quran and Sunnah cover sets of broad and general values encompass the intangible: ideological and philosophy, to the tangible ones: spatiality and functionality (Omer, 2019). Regarding Qur'an, numerous of *Surah*(s) and verses explain about architectural realm. As the role of Quran as guidance for Muslim, those verses also explain about guidance in built environment, oh how to do and what's not to do in doing architecture for Muslim.

Decorating

The visible beauty of Allah's servants, which reflects His blessings on them, as well as their interior beauty, which represents their thankfulness to Allah for those blessings and mercies, are both beautiful in Allah's sights (Spahic Omer, 2022). Yet, in terms of decorating and beauty, it is in some way prejudiced by the exaggerated that leads to waste and an action that is overly proud. In the chapter of Al-Zukhruf of the Quran, the prejudiced in beautification has already been cautioned. In his work, Omer (2022) offers a comprehensive explanation of the primary ideas discussed in the surah Al-Zukhruf, which, taken literally, translates to "gold adornments." This surah explains the different points of view, between the true beauty of the truth and the wrongdoing that can be found in beauty, as well as what people typically embrace as substitutes for the true beauty or decoration that they seek.

Decent in Design

To maintain Muslims in a state that is good and humble, the Islamic conceptual design must inevitably include the quality of simplicity as an essential character trait. Modest in appearance also ties to the preceding sub chapter, which was repeated multiple times as a warning to Muslims to live their lives with humility. The concept that one should avoid being vain and overly arrogant, which can lead to one taking their mind off the oneness of God and missing out on the afterlife, is promoted by designs that are decent. In his book, Omer (2022) offers an interpretation of the passage from the Quran known as surah Al-Shu'ara, which describes the time when the disobedient people of prophet Hud constructed landmarks and enormous castles on the high places, both to amuse themselves and to display them to their adversaries, competitors, and neighbours. These overly dramatic behaviours, rather than showing gratitude, became even more extreme as a result.

Home, Instead of House

The literal meanings of the words "home" and "house" are very similar; yet, the word "home" has a more significant meaning in relation to habitation. According to the passage of the Quran known as Surah An-Nahl, the concept of home in Islam receives a great deal of attention, and it is constructed such that it is carefully designed and functionally maintained. In addition, according to Islamic belief, a Muslim's house should be a place where Islamic principles can be practised and where members of the family can get religious instruction in order to create a miniature version of a Muslim community. In addition, the word sakan, which appears in verse 80 of Surah An-Nahl, is defined by Omer (2022) as meaning "home" and a location that offers tranquilly. With the verse 41 of Surah Al-Ankabut, he also explains the distinction between the terms "home" and "house." This particular surah makes use of the term bayt, which can be

translated as either "home" or "shelter." Bayt also has connotations akin to those of a tent, which is a transitory or temporary shelter. So, the ultimate objective of a home (sakan) as the goal of a house is to satisfy the fundamental requirements of a human being (bayt).

Sustainable Development

Islamic concept on sustainable development is thorough and all-encompassing, taking into account the spiritual and moral dimensions of progress that are inseparable from the day-to-day existence of Muslims. As a result, adhering to the principles of sustainable development is obligatory for Muslims, especially considering the fact that the achievement of the Sustainable Development Goals has become a pressing international concern. Humans, in their role as God's representatives on earth, are charged with the responsibility of repairing and preventing damage to the planet. This idea is emphasised on humans, as it is indicated in verse 41 of the Surah Ar-Rum of the Quran. This verse describes the damages on land and sea that were unmistakably caused by humans, as well as the consequences of these damages as a warning for humans to return to the straight paths. In addition, verse 11 of Surah Ar-Rad of the Quran, which completes the previous verse's discussion of the consequences they have earned, states that Allah would not alter the condition of His people until they alter what is inside themselves. Hence, it is our obligation in the constructed environment to prevent damage on land, sea, air, and the entire world.

2.3.1. Concept of Tauhid

The concept of Tawhid comprises Muslims living their entire lives acknowledging Allah's uniqueness and unrivaledness as God and The Creator. This concept should be the peak of all building-related fields.As stated in Surah Adh-Dhariyat verse 56, Allah creates humans and jinn to worship Him, the notion of tawhid has a strong correlation with the

purpose of humankind's creation as vicegerent / caliph on earth. Hence, Islamic architecture should be practical for Muslims to practise their religion through praising Allah, upholding Tawhid, and promoting the formation of excellent character (akhlaqul karimah) (Indrawati et al., 2016). In his work, Omer (2022) explains that Surah An-Nahl teaches us that Allah is the one Creator and that His creations reflect His magnificence. Hence, in the field of Islamic architecture, any constructed environment should encourage humans to remember Allah, practise their faith, avoid evil habits, and renounce any polytheism.

2.3.2. Relationship Towards God

The ultimate goal of Islamic architecture is to provide a location for maintaining the relationship with God (hablum minallah). This idea is inseparable from the prior idea that Islamic architecture has a significant relationship to the purpose of humankind's creation, which is to worship Allah (Indrawati et al., 2016). Hence, the supreme of human creativity should be implemented in every constructed habitat. About the worship of Allah, Nu'man (2016) conveyed the notion that worship can be performed not only in mosques, but also in the home as a miniature mosque (Nu'Man, 2016). In other words, the design of a Muslim constructed environment should reflect Islam's principles and adhere to sharia in order to create an ideal setting for Muslims to practise their religion (Yusof, 2011). Hence, Islamic architecture should reflect Islamic ideas and is a manifestation of Islam (Omer, 2010b). To fully reflect and execute Islam in a physical environment, the designer must eliminate aspects that could block tawhid, or God's unity. Eliminating things that represent other religions and statues in human or animal form is one implementation of the tawhid philosophy. Providing a modest built environment to

facilitate the performance of religious rituals and preserve the users' relationship with God (Othman et al., 2015).

2.3.3. Relationship between Humankind

Social interaction is an indispensable aspect in Islamic architecture which *hablum minannas* or relationship between humankind is something has to be well-maintained in Islamic thought. Islamic architecture and social life is inseparable and indispensable due to it is product of interaction between Muslims and social directives originating from Islamic law (Noaime et al., 2020). In order to enhance to relationship with societies, thus Islamic architecture also emphasizes in hospitality, which an acceptance and treatment to others in our own zone. Hospitality is inescapable to local culture and rooted in behaviour that lasts to present. Previous research about hospitality linked to provisioning guest area in housing with maintaining privacy for the secure of family members (Othman et al., 2015). Likewise, hospitality is social acceptance without ignoring household privacy (Al-Mohannadi & Furlan, 2022). Hospitality remains a tight knot to a privacy matter; at least other similar scholars mention this so (AlKhateeb & Peterson, 2021). Those two previous studies show that provisioning hospitality while concerning privacy outright is mandatory in Middle East housing. Thus, it is interesting to find hospitality establishments in a specific country with various cultures. Due to hospitality is inevitable to household privacy, then hospitality is applicable for guests and family members. Hospitality for guests can be divided by gender in some countries, and hospitality for family to maintain intimacy and privacy (Othman et al., 2015). To sum up, hospitality is immensely needed in Muslim houses as the mechanism of Islamic value implementation to treat the guest well or cater the gathering while the privacy remains secured.

2.3.4. Relationship Towards Nature

Islam as a religion provides guidance; *Quran, hadith,* and *sunnah*, for its believers comprehensively to life their life as Islamic way. Including the utilizing of nature as resources for everyday life, Islam has provided guidance on how to use the natural resources wisely. In a research by Nu'man (2016) explained that the meaning of *Surah Al-Baqarah* verse 30, humankind as vicegerent on earth as the representative of Allah on earth, to act according to Allah's will and maintaining Allah's limits. His research also explore on avoiding wasteful of natural resources as it is displeasing to Allah, *Hadith* narrated by Ibn Majah (Nu'Man, 2016). In *sharia*, utilisation and use of natural resources is everyone's right and privilege as long as it is being used sustainably. In addition, Quran declares the relationsh

site to the environment is also a necessary ability as Muslim to create an Islamic built environment, so we can create a built environment that friendly to limited resources and maximizing the unlimited resources (Khan, 1978).

2.4. Islamic Values of Housing Architecture in Various Country

Islam as the religion has spread around the world and influencing many aspects to its believers. The Islamic values deeply rooted in the lives of believers, significantly influencing their socio-cultural practices. The values influence many aspects from the housing design and spatial arrangements, connection to the family members and community, and the connection to the nature. The embodiment of Islamic values also shaping the cultural identity as the integration of aesthetic elements and spatial arrangement that reflecting the Islamic teachings and values.

2.4.1. Privacy meets the modesty

This principle is fundamental in the Muslim homes that ensuring spaces to respect personal privacy and modesty of the family members.

2.5. Islamic Values of Indonesian Contemporary Architecture

Understanding Islamic ideals in Indonesia is the starting point for any discussion of Islamic architecture in Indonesia. Hence, the discussion of Islamic architecture in Indonesia explores the same subtopics pertaining to social, cultural, economic, and moral issues, but in an architectural manner; thus, the subtopics will focus on the spatial.

2.5.1. Social Spatial

Mosque is the prominent symbol of Islamic architecture, where Prophet Muhammad PBUH gave an excellent example of Islamic architecture through Prophet Mosque/ Nabawi mosque in Madina, Kingdom of Saudi Arabia. Prophet Mosque established an example of a multifunctional religious building, where provide spaces for worship, socialize, economy, and education. In terms of social, the existence of Mosques in Indonesia is inseparable to socio-religious condition. Function of mosque for the society nearby is broader than just a prayer space, Islamic cultural activities also involved in the function of mosque in Indonesia (Sudrajad & Wibisono, 2021). In addition, to provide a religious spatial event, every small community has their own *Musholla* (small scale of mosque, or called as *Suarau*) to perform daily pray together with neighbour (Fajariyah, 2021) and another socialization activity in small scale. Thus, every community has their own sense of belonging to their musholla or mosque including community participation in the development of their worship spaces from the planning,

construction, until the finishing and ready to be used (Kusyanto et al., 2019). The role of mosque in Indonesia is not limited to connect people among community, formerly the role of mosque also the liaison between royal palace to the society as embodiment of hablumminannas (interaction between human) (Fajariyah, 2021). Hence, a mosque should accommodate spaces for socializing and congregation between patrons and community around mosque (Bakri, 2018)(Imriyanti, 2014).

The value of social is also obviously emerge in the scheming of *Pesantren* / Islamic boarding house which considering togetherness to achieve socializing between dwellers (Mubarok et al., 2018). *Pesantren* is an Islamic-based boarding house which usually provides formal and informal educational institution. In line with Mubarok's statement, Firmansyah et.al. (2020) also mentioned hospitality aspect in a scheme design of *Pesantren* to promote socialization activity between dwellers and patrons . As mentioned previously in sub-chapter moral aspect of Islamic value, *pesantren* becomes a parental choice for kid when it comes to Islamic-based education. *Pesantren* also promotes socializing learn and gives a real example of space's negotiation to create a harmonious spatial arrangements among dwellers.

While negotiation of space for community religious activities in house was presented in several neighbourhoods in Indonesia (Junara et al., 2019) (Winarni et al., 2014). Negotiation in spatial not only in space but also in identity to maintain the homogeneity in a community (Putrie et al., 2018). Another obvious proof of social spatial in Indonesian Islamic architecture is a space to receive guests. Besides terrace, traditional Indonesian house also provide *Pendhopo* (gazebo) as a place to receive guests, hence guests/visitors should not enter the house. (Supriyanta & Malik, 2016).

2.5.2. Cultural Spatial

In addition to being a site where people can conduct shalat, the mosque also serves as a venue for recitations of the Quran, Tahlil, and Maulud Barzanzi (Fajariyah, 2021). Musholla (Surau) served as a location for the performance of Terbangan, often known as religious music (Junara et al., 2019). In addition, the participation of the local community in the construction of a mosque in Indonesia is an essential component of the culture that underpins the subsequent formation of a sense of belonging to that mosque (Kusyanto et al., 2019) (Bakri, 2018). Due to the fact that the height of the Sang Cipta mosque and the Panjunan Red Mosque should not be higher than the Keraton (Royal structures), neither mosque has a minaret. This is done out of respect for the Sultan (Royal buildings)(Gaputra, 2020). In addition to this, according to Sutrisno et al. (2019), the design of a mosque that embodied the traditional design is also a reflection of the maintenance of socio-cultural norms (Sutrisno et al., 2019)(Wismantara, 2012). The mosque, as the primary structure in a community, not only exerts a tremendous influence on the community's sociopolitical and cultural life, but it is also an essential component of royal urban environments. The community that sprang up around the mosque in the middle of the downtown area was traditionally connected to royal or mosque activities. One such neighbourhood was the Kauman district (Setiadi & Depari, 2021).

2.5.3. Economical Spatial

One example of fundraising in either monetary or labour terms is provided by the participation of members of the local community in the construction of mosques in Demak (Kusyanto et al., 2019). In addition, the purpose of the mosque for the community that surrounds it is to be a site that provides employment and encourages local businesses to sell their wares in the vicinity of the mosque (Bakri, 2018)(Imriyanti, 2014).

Furthermore, economic spatial theory was utilised in the construction of traditional Indonesian homes, such as dual-purpose dwellings utilised in the manufacture of batik in the cities of Kauman Pekalongan and Yogyakarta (Junara et al., 2019) (Setiadi & Depari, 2021). As a result of the expansion of the city, the majority of residences in the area are now either boarding houses, rental houses, or double-function homes that also contain shops.

2.5.4. Moral Spatial

Mosque as the vital embodiment of Islamic architecture holds a firm role as a place to practice interaction between God (Allah) and human (Fajariyah, 2021). In terms of urban spatial, the role mosque often became the main orientation of the houses or neighbourhoods (Ovan, 2021) (Setiadi & Depari, 2021) (Junara et al., 2019). The interaction between human and nature in Mosque can be implemented in the garden which serves a tranquility ambience to patrons while preserving the environment through plantation (Fajariyah, 2021)(Fakriah, 2021)(Tafliha, 2020). When it comes to mosque, the cleanliness aspect is inextricable to ablution area and arrangement spatial for clean and dirty space (Bahar, 2012). Mosque and other Islamic religious building with concern in sustainable building concept were arise in last decade (Hidayat et al., 2018) (Mubarok et al., 2018) (Bakri, 2018) (Imriyanti, 2014). The implementation of eco-living, considering the natural preservation is a must-have habit as Muslim as the embodiment of Islamic value (Bakri, 2021)(Muchlis et al., 2019). The eco-living concept also embodied in the design of overlapping roof to allow the air circulation and suitable for local climate (Gaputra, 2020). Traditional neighbourhood in Bandung named Kampung Mahmud also adjust their built environment with the earthy material and well-concepted building that allows natural ventilation and daylight (Puspitasari, 2019).

Acculturation process that embodied in the design of Mosques is an action of respecting indigenous belief, and reduce the culture shock, hence Islam is acceptable in Indonesia (ashadi, 2021)(Fajariyah, 2021) (Gaputra, 2020) (Saputra & Rochis, 2014). For the example, rectangular floor plan of a mosque is an adopted model from traditional Javanese building that originally from pre-Islamic era (Gaputra, 2020). Hence, the existence of mosque for Indonesian muslims is broader than just to perform shalat. But also symbolize of acculturation and respect to culture and other religion. The activity of shalat in masjid also strenghten the community and interaction of local muslim in Indonesia.

Although, it is obligatory to perform shalat at the mosque, at least a Muslim's house should provide a space to perform in-house shalat to maintain hablumminalalamin (Aulia & Syafikri, 2020)(Supriyanta & Malik, 2016). Furthermore, a Muslim's house should also provide secure feeling for its dweller, such as privacy. To maintain dweller's privacy, terrace adjustable as a designated place to receive the guests, hence maintained privacy without compromising the hospitality (Aulia & Syafikri, 2020) (Putri, 2014). The arrangements of privacy not only intended to secure the dwellers from visitors but also to provide a secure feel between family members (Supriyanta & Malik, 2016). The cleanliness concept for Muslim not only applicated in Mosque but whole their everyday life including in the house where clean space is expectedly all over the house as reflected the Islamic value (Putri, 2014). Afterall, the ultimate Islamic value that should consider in the design of Islamic built environment is following the Islamic value, sharia, modesty but avoiding excessive and reinvigorate the regionalism (Khamdevi, 2014) (Rozan et al., 2014).

2.6. Islamic Values in Housing

One significant aspect in Islamic architecture that built it flexible and acceptable to any human race is the universality. The characteristic as open-minded outlook on other culture and custom but remain tight knot on *Sharia* law constructs Islam as a universal civilization (Omer, 2010b, 2019). Previous study also reveals the universality establishes Islamic architecture as *Rahmatan lil Alamin,* spreading and promoting goodness (*amar ma'ruf*) through Islamic teaching to all (Indrawati et al., 2016). Hence, this feature is applicable for Muslims anywhere they are with diversity of cultures, customs, and even religions. This feature also strengthen Islam and makes Islam acceptable easily to non-Muslim. The universality of Islamic architecture triggers the study to find how to implement with the culture of Indonesia. This sub chapter explores Islamic architecture specifically in housing for a more focused research in dwelling and further in Islamic student housing. Dwelling system is also acknowledged as a culture which constructs from actors' everyday practices. The culture of dwelling system from actors' everyday practices emerges a locality concept non-physically but significant to be studied for a proper implementation of cultural universality in Islamic architecture particularly in housing.

The concept of Islamic architecture is not something that has just flourished but has been realised for years since Islam was revealed. Islamic architecture's literal meaning is an architecture derived from Islam (Hasan et al., 2015). The implementation of Islamic values primarily becomes a framework for Islamic architecture (Indrawati et al., 2016)(Omer, 2010b). In Islamic architecture, a built environment should foster *ibadah* (worship) activities for Muslims whose activities are guided by the Quran and the Prophet's Sunnah (Omer, 2019). Similar to the previous statement, Hwaish added Ijma' (the consensus of the entire Muslim community) and Qiyas/ Ijtihad (humanity reason in

the elaboration of the law) as consideration points for the Islamic built environment (Hwaish, 2016). Hence, the understanding of Islamic architecture should be considered entirely from Quran, Sunnah, and their interpretations. The implementation of Islamic architecture is not limited to Muslim, but every religion and believers since Islamic architecture is universal and applicable everywhere.

Some researchers have revealed the indicators of Islamic architecture for implementation in dwellings or another built environment of humankind. Indrawati, a researcher from Muhammadiyah University of Surakarta explained that Islamic architecture consists of three points. Those three points are functional (hasan), good (thoyib), and aesthetic (jamil) (Indrawati et al., 2016). Indrawati explained that "functional" term in Islamic architecture following humankind's purpose as caliph on earth, as mentioned in Quran surah Al Baqarah verse 30. Primarily humans were created to worship Allah, carry out His orders, and stay away from the ban. Then "good" interpreted as promotes goodness (*amar ma'ruf)* through Islamic teaching as *rahmatan lil Alamin.* Hence, "good" has four points: universal, rational, care, and forming a civilisation. The last is "aesthetic", promotes beauty against badness (*nahi mungkar*) but avoiding *syirik.* Indrawati's concept of Islamic architecture described below with the top of indicator point is Functional (*hasan*) (Indrawati et al., 2016).
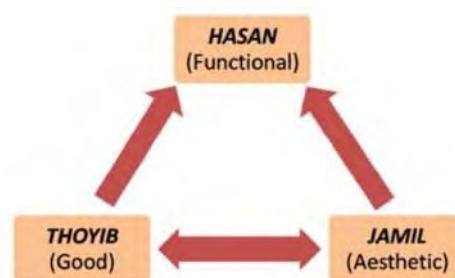
Figure 2.1 Indicators of Islamic Arcitecture

According to Omer (2019), the definition of Islamic architecture is reflected in the Prophet's mosque in Madina, which its function accommodates Muslim needs (Omer, 2019). Nevertheless, the implementation of Islamic architecture is not limited to the mosque but can be applied in any building. Islamic architecture is based on the Quran and the Prophet's sunnah (tradition). Prophet has taught Islamic architecture through the way he built Nabawi Mosque, Madinah, and his house. Except for those objects, Islamic values in architectural objects were also taught by him through his friends' houses. In this case, indeed, a Muslim is equipped with Quran and Sunnah for their daily lives and architecture particularly. Omer explained that Islamic architecture rules in the Quran and Prophet's sunnah summarised in the following concept: education, guidance, inspiration, thrust, point of reference, and contentment. In his books, Spahic Omer also explained seven principles of Islamic architecture following: function-form relationship, eco-friendly, cleanliness, comprehensive excellence, social interactions, safety purposes, and indigenous versus foreign influence (Omer, 2019) (Omer, 2009).

The concept of Islamic architecture, also explained by Hisham Mortada, is way broader than just the realm of housing or building architecture. In his book, he explained Islamic values in terms of the built environment, which covers the natural environment where human live, urban environment, neighbourhood, family, and individual. About this research in Islamic architecture, his statement also in line with previous explanations from experts. Islamic architecture is based on Islamic shariah, which sourced from Quran, sunnah, and fiqh as supplementary sources. Later he explained that Islamic values embodied in the built environment should promote social interaction in any kind of realm, either urban, society, or family. Humility is mentioned in Islamic values as well, which should dominate Muslim life and actions. Besides that, Islamic architecture strongly encourages its user to renew technology regarding the built environment as long as it does

62

not contradict Islamic value. As mentioned in the previous theory, Hisham Mortada also announced privacy and safety stipulated in Islamic values for the built environment (Mortada, 2003).

When it comes to the built environment, dwelling is a primary need in human life. Dwelling is the most extended place where humans live in a day. Hence, it can be concluded that its occupant is influencing dwelling, or vice versa dwelling influences its occupant. Dwelling can be composed of various types, such as landed housing, vertical housing, or even moveable housing. In this study, dwelling designated as housing as it is more familiar in daily life. As a major part of life, housing for Muslims has also guided in following Islamic sharia: Quran, sunnah, and fiqh (Mortada, 2003) (Omer, 2019) (Mortada, 2003). Building a house as a safe shelter for family, worship place, and practicing Islamic living is obligatory for Muslims (Omer, 2010a).

Based on comprehensive systematic literature review, housing for Muslim should require these following parts: design fosters faith, promoting green building, social connectedness, maintaining privacy.

2.6.1. Design Fosters Faith

The aspect of design fosters faith can be described as realizing enhance faith, functional, and humility.

Enhance Faith

Maintaining faith is a prominent act of Muslims' everyday life as the purpose of human creation, is to perform *ibadah* and worship Allah. Thus, every activity of Muslim everyday life should refer to *ibadah* and performing faith as based on Quran and *hadith*. Interpreting a house like a mosque to perform *ibadah* is an act to foster faith in a Muslim's house (Omer, 2010a). In addition, design for Muslim's built environment should fostering

the concept Oneness of God. The design expectedly reminds the user in Allah constantly to create higher level of religious understanding (Dewiyanti & Kusuma, 2012).

Functional

A well-established research finding found that design fosters faith also means a functionality, accommodates the primary duty function of humankind, to worship Allah and implement Quran and *sunnah* in everyday life (Indrawati et al., 2016). Regarding functionality, Omer (2010) describes that functionality of a house is to unwind from outside pressure and delightful place to rest. Hence to achieve the functionality of a house, a well-planned and consideration of latest technology is required to strive the excellence (Omer, 2019).

Humility

Having discussed how to construct design fosters faith, as supplementary, it is essential to look at humility in design. Humility interprets as no profligacy in design, pre, during, and post construction. Humility also describes as remain polite, humble, and modest to Allah (Othman et al., 2015). Humility in design encourage Muslims to beautify their house according to *sharia* principles, non-idolatry objects or artefacts, no animal or human-like statues, and remain humble without extravagance. Previous research regarding the essential of Islamic architecture mentioned that there are some *hadith* narrations explain about avoidance in glorifying an object over the social value that supposed to cater (Rasdi, 2008).

2.6.2. Promoting Green Building

The issue of global warming in the early 19th century brought us to an environmental-friendly building concept. In the other hand, Islamic values in Quran and *sunnah* has already encourage Muslim to prevent the damage caused by the human built

environment, far from global warming issue raised. The consideration of green building concept in implementation will lead Muslim to an eco-friendly and zero waste building (Omer, 2010a, 2019). A comprehensive study regarding promoting green building in Islamic architecture expands several aspects, encompass eco-friendly and zero waste and clean.

Eco-Friendly

Eco-friendly in the aspect of Islamic architecture is a mandatory variable to the Islamic built environment. The role of humankind as vicegerent on earth, as the reflection of Islamic value constructs an inseparable to the concept of eco-friendly. Preservation on environment in the process of built environment establishes a solid understanding of Islamic architecture is eco-friendly. During the development of built environment, respecting the site and using good performance materials are the implementation of Islamic value in practice (Nu'Man, 2016). Additionally, Nu'man explained that respecting the site means not leaving any damages to the environment its site placement as Allah displeasing any abuse and corruption on earth (Quran *surah Al-Baqarah*, verse 60). In terms of good performance materials for building, it means that the material should have a good durability, safe to human, and locally sourced. Locally sourced encourage the builder to utilize surrounding resources to reduce energy wastage in transport (A. S. Attia, 2021).

Cleanliness and Zero Waste

The cleanliness is a particular aspect in Islam essentially a prerequisite before performing pray or any *ibadah*. Thus, ablution (*wudhu* in Arabic) is one of cleanliness practice in Islam and become a foundation of cleanliness practices for Muslim (Hamid et al., 2016).

2.6.3. Social Connectedness

Visiting family, colleagues, and relatives are activities that inseparable to Muslims culture. Maintaining social connectedness trough visitation is part of practicing *Sunnah* and highly recommended for Muslims to rectify communication between Muslim (Quran *Surah* Al-Anfal, verse 1). Thus, visitation to family, colleagues, and relatives is expectedly encourage us to give a favour to those in need (Quran *Surah* An-Nahl, verse 90). The term of maintaining social connectedness has been portrayed in Prophet Mosque where provisioning various mosque functions more than just to pray, but also as leisure place to create a social connectedness between patrons. Hence, mosque can facilitate anyone and anytime to practicing faith and maintaining social connectedness. One longitudinal study proof that provisioning sufficient spaces for social connectedness in Mosque contributes in *da'wah* and cater the need of community in education (Baharudin & Ismail, 2016).

In the realm of housing, social connected can be established with society or neighbourhood. A research give an example of social connectedness with society by providing a free space of private space for public space (Alomari & Alqimaqche, 2013). Another example of social connectedness is giving a community territory for the usage of private space for religious activity (Suprapti et al., 2017). This practice is a two-fold in social connectedness and maintaining relation to God. Then social connectedness in home can be practiced in receiving guests and how to treat the guests properly in a decent space (Othman et al., 2015). In another hand, Omer (2010) explored social connectedness in Muslim homes is not merely between house owner to guests, but between family member. Social connectedness in house caters bonding and communication between family, then a proper house will generate a microcosm of a civilization (Omer, 2010a). However, both Othman & Omer agree that social connectedness is indispensable to sociability with a

66

controlled privacy, to maintain intimacy and household security, particularly to women member of the house.

2.6.4. Maintaining Privacy

Privacy is a mandatory feature of Islamic architecture and significantly influences the establishment of social connectedness (Indrawati et al., 2016; Omer, 2010a; Othman et al., 2015). Interestingly, privacy in house from a necessity turns to an embedded socio-culture variable, particularly for some countries in Middle East. Privacy has a layered level for each family member, from individual, family, female, to household privacy (AL-Mohannadi et al., 2020). The critical point in privacy is to secure the family member physically and unphysically. Physical privacy can be obtained by securing the visual, while the unphysical privacy is achieved by securing acoustical and olfactory (Othman et al., 2015). A proper privacy arrangement in a house generates a protection against outside world and promotes a propriety and decency between family members and guests (Omer, 2008). Thus, privacy is supposed to unlimiting the sociability and without ignoring the household privacy (Manaf et al., 2019). The mechanism of housing spatial arrangements is prerequisite to achieve the integral privacy and sociability to achieve social connectedness between family members or guests.

2.7. Architecture Housing in Indonesia

This study emerges locality as characteristic of local Indonesian housing and expands the understanding of locality physically and from culture and everyday activity, thus generate distinctive spatial. The distinctive spatial spaces in local Indonesian houses generated from culture and everyday practices (Yatmo & Atmodiwirjo, 2013), its presence can not only observed as physical entities but requires comprehensive

investigation to provide another perspective in locality-based architectural design (Yatmo & Atmodiwirjo, 2013)(Atmodiwirjo & Yatmo, 2021). In the realm of architecture, locality, regionalism, and organic architecture contain of elements that respecting nature towards vernacular architecture and it supposed to be remain preserved as sustainable concept (Rasdi, 2008). Hence architecture in locality contributes in the design approach prioritising distinctive local or characteristic from the environment. Examination of locality brings to traditional and vernacular housing buildings of Indonesia as a base of this study. Research reveals that the locality of spatial spaces in local houses determined by **privacy, sociability, and orientation**.

.

2.7.1. The Values in Housing Privacy

Islamic architecture is inseparable from privacy which is the substantial value of this architecture. Studies explained that privacy is essentially required in Islamic architecture and established in Muslim houses as a need (Omer, 2010a) and provides private and safe space for house members (Othman, 2016). The key to privacy announced is even broader explain in the realm of the built environment (Mortada, 2003). Those preliminary studies considering the importance of privacy in Islamic Architecture and the focus of this study outright. However, privacy and the designated private area must be well-reviewed to establish a haphazard understanding. Treatments for privacy do not simply present as a closed area; somewhile it develops as a balance between two areas, more and less open, the other is more and less closed (Boettger, 2014). Whereas distinctive spatial spaces in local Indonesian houses are generated by culture and daily practices, as a consequence, it requires a comprehensive investigation. Hence it is required to investigate distinctive privacy in Indonesia as the understanding of privacy in locality values of Indonesian traditional houses. The investigation shows that the

establishment of privacy in several traditional Indonesian housings are various and consist of physical and non-physical.

2.7.1.1.   Physical Form of Privacy

The privacy physically formed by separator or divider; height adjustment for building elements; build layers of rooms as transitional space; clear division of zoning; selected wall material; and distinction entrance. Physical forms of privacy dominate the initial studies collected for this research.

Separator

In his book about traditional settlements in Indonesia, Wiryomartono explains that wall defines private and provide sociability space properly. Instead of receiving guests in front of the house to hide the privacy, the wall allows house owners to receive guests inside their house politely and in the cage of sociability (Wiryomartono, 2014). The separator function to maximize sociability is in line with the characteristic of Malay houses in Riau. Malay houses in Riau are equipped with no separator but a married daughter's room (Samra & Imbardi, 2020). The presence of a separator stipulates a clear division of zoning outright, but study about Malay houses in Riau proof that divider will only be built if it is indispensable, such as providing private space for the spouse.

Height Adjustment

Existing studies provide various height adjustments on building elements is intended to increase the privacy level. Occasionally traditional houses in Indonesia are unique due to the organization of rooms defined by higher floor peel. Indigenous Joglo houses, which spread around Central Java and Yogyakarta, are equipped with this feature

to define the privacy level of a domestic spatial area. Gandhok, a family's private space in Joglo found higher floor peel than Pringgitan and Pendhapa as space to receive guests (Ju et al., 2018a). Limas house of Southern Sumatra also treats the level of domestic spatial with floor peel. Bengkalis Atas as a sitting space for distinguished guests located 15-40cm higher than other floors, and the family's private areas follow right behind the Bengkalis Atas with the same height of floor peel (Anwar, 2019).

Increasing the height of house elements also occurs in windows and the whole floor of the house to create privacy in visual. Native houses in Kudus Kulon treat the windows higher than usual and enclose an additional screen in front of the door to obstruct visual from outside (Suprapti, 2014). Malay houses also engendered height level treatment for privacy in West Borneo. The house is built on 1-1,8 meter stilts and avoids locating windows and doors facing neighbors' openings to maintain visual privacy (I. kartika Sari et al., 2019). The adjustment of house elements' height acquires an increased level of privacy. Floor peel explains that private spatial is higher among other domestic spatial. While privacy is visually achievable with treatment to openings such as: built house on stilts, high mount of windows, enclosed door layer, and avoid mounting openings facing neighbour's openings.

Transitional Space

Except for higher floor peel, traditional houses of Yogyakarta are also equipped with transitional space from outside to inside houses, namely *Emperan* and *Kuncungan* (Ju et al., 2018a). Recently, Indonesian houses utilize *Emper* as a guest room due to limitation space of the house. Transitional space in Makassar traditional houses is called Bale-bale and has a double function; screen guests before receiving and interact with neighbors (Mustafa et al., 2016). Hence, those studies indirectly explain another function

of transitional space apart from "waiting-space before received", that is sociability function.

Zoning

Zoning is the primary contributor form of privacy in traditional Indonesian houses. Clear division of zoning in the house leads privacy to a-must-have space in domestic spatial. Sundanese traditional houses of Kampung Naga are an example of an obvious distinction between spaces which accessible and inaccessible for guests (Darmayanti, 2016). Practices of zoning through the distribution of rooms toward several areas also determine from house area for receiving guests, a central area for private family space, and rear house area for service purpose (Suharto et al., 2018a) (D. P. Sari & Chiou, 2019) (Naing & Hadi, 2020). Distribution of house spaces brings the characteristic of traditional Indonesian houses to provide guest room for maintaining sociability or organize gathering (Elfira & Wibawarta, 2019) (Napitupulu et al., 2020) (Hastorahmanto et al., 2020) (Izziah et al., 2021). Apart from providing sociability and gathering space, studies elaborate that the gender spatial as the fundamental of clear division of zoning in Indonesia traditional houses, and gives particular concern to women space outright (Darmayanti, 2016) (Suprapti et al., 2017) (Santosa, 2019) (Elfira & Wibawarta, 2019) (Napitupulu et al., 2020) (Izziah et al., 2021).

Wall Material

The matter of wall material based on table 1 above only happened in Bali. The case study of ancient traditional Balinese houses underwent renovation on the wall to increase privacy due to behavioural changes (Raka & Runa, 2018). Changes in soundproof material often occur to increase acoustic privacy from unlawful listening (Babangida & Katsina, 2018).

Distinction Entrance

Another practice of privacy physically is the distinction entrance house. Omo Hada, traditional house of Nias adjusting door entrance based on the characteristic of the spatial. One larger door to public space and one smaller door towards private space (Siahaan, 2020). Multi entrance in a house is also found in authentic traditional houses of Kauman Semarang (Suprapti et al., 2018). The house is usually equipped with Lengkong, a private alley to access the service area from outside then link to private space. Hence, to reach service and the private area should not thru public space or guest room.

2.7.1.2.   Non-Physical Form of Privacy

Non-physical privacy is formed by spatial agreement and gender spatial that requires agreement space between men and women. Notably, physical privacy establishment is tangible and determining the personal character. The elimination of these physical factors will vanish privacy. At the same time, non-physical privacy is established by respectful agreement between house members and guests.

Spatial Agreement

Everyday culture based on spatial practices establishes privacy in traditional Indonesian houses. Activities involved in everyday culture determine men's activity and women's activity. Distinctive masculine activity such as farming and other outdoor activities locates men's territory near farming tools, whereas feminine activity such as cooking and cleaning the house locates women's territory near kitchen utensils (Idham, 2021). Those practices establish a spatial agreement which inseparable from gender activity. The spatial agreement is substantially embodied in a room with a divider or even without any divider. Spatial agreement in houses determines rear houses such as kitchen and service areas as a feminine activity, thus stipulated as women's area (Idham, 2021) (Izziah et al., 2021). It exemplifies spatial agreement with the divider. In contrast, ancient

traditional houses in Kupang provide an example of a space agreement established without dividers. Everyday local culture agrees to men's territory located in the left house, while women territory in the right, and between them built no divider, although in women territory has a divider at rear (Fanggidae et al., 2019).

2.7.2. The Values in Housing Sociability

Sociability is inevitable to the culture of a community and rooted in behaviour that might last to the present. Comprehensively, sociability is not about the industry, such as hotelier, food, and beverage, or MICE, but it is literally how culture sets an obligation to treat strangers well (Lashley, 2008). Islamic value in sociability comprehensively can be interpreted as social and cultural context (Stephenson, 2014). A great deal of previous research into sociability has focused on housing that provisions a receiving guest area with levels of privacy for guests and maintains family privacy (Othman et al., 2015). Similarly, other scholars found that sociability is social acceptance with(Al-Mohannadi & Furlan, 2022)y (Al-Mohannadi & Furlan, 2022). Sociability remains a tight knot to a privacy matter; at least other similar scholars mention this so (AlKhateeb & Peterson, 2021). Those two previous studies show that provisioning sociability while concerning privacy outright is mandatory in Middle East housing. Thus, it is interesting to find sociability establishments in Indonesia with various cultures. In architectural realms, those cultures carry various housing designs and somewhat different spatial mechanisms of dwelling (Wiryomartono, 2014).

When it comes to sociability, Indonesia, as a living entity of diverse spatial mechanism dwelling, contributes to various sociability mechanisms. Thus, sociability roots in Indonesians as a strong character and influences their everyday life. Therefore, the sociability mechanism in traditional Indonesian houses is worthy of exploring

sociability values. It has been suggested that studies about traditional housing values are required to explore previous lifestyle evidence (İpekoğlu, 2006). The sociability mechanism in Indonesian traditional houses encompass earthquake structure, changes function, social status, zoning, gender based and Islamic value influences.

Earthquake Structure

The construction that supports sociability practice is found on Nias island. The existence of a passageway that connects with the neighbour's house strengthened the construction and became an earthquake-proof feature outright (Sadaka et al., 2013). This unique finding indicates that the sociability aspect in Nias was established in the passageway that connects to the neighbour house and functioned as an earthquake-proof structure. What is surprising is that sociability strengthens the togetherness and structure outright.

Changes of Function

Prior studies have noted the changes in space function regarding sociability practice between recently and formerly. Some people of Jakarta changed the verandah (terrace) function, which formerly was the place to receive guests in Betawi culture (Rahmadina & Lukito, 2020a). According to the study, guests are recently received in the house, while the verandah functioned as a multipurpose space to support domestic activities such as relaxation and vehicle parking. However, verandah remains due to the tropical housing comfort in avoiding the sun glare and protecting from raindrop splash. The literature review above found data on the association between changes in function and sociability in entertaining guests. People of Batak Toba in Samosir Island, North Sumatra, used to entertain their guests outside of the house. The open space in the middle of the village used to be a place to entertain the guests, while nowadays, the house owner tends to decorate the guest room to receive and entertain their guests (Hanan, 2012). What

stands out in the graphic above is the changes in the function of sociability spatial also occur in Yogyakarta, where the inexistence of Emper (terrace) due to the inflexible design of the post-disaster house (Agustina, 2017). The study found that post-disaster houses influenced the changes of locality behaviour in spatial and perception of house standards.

Social Status

The single most striking observation to emerge from the literature review above is the social status that influenced the sociability practice that only occurred on Sulawesi island. Three locations in Sulawesi believed that the social status of guests is an important entity to consider in receiving guests. Studies conducted by Abidah and Maknun stated that guests with higher social status deserve distinction sitting spaces (Abidah, 2017)(Maknun et al., 2020). Abidah (2017) stated that two traditional houses in Sulawesi, Saoradja Lapinceng House, and Banua Layuk House, provide signs to distinct where guests have to sit according to their social status. In comparison, Maknun et al. (2020) stated that Makassar culture receives honourable guests in a distinct space. Meanwhile, the traditional house of South Sulawesi has Alang Sura, a place to store the granaries and to receive honourable guests outright.

Zoning

The most prominent finding to emerge from the analysis is that zoning plays an essential role in providing sociability for guests in Indonesian culture. The guest zone is located at the front, starting from the terrace or verandah and followed by the guest room. That concept is mostly applicated in traditional Indonesian houses as stated on the literatures above in Sulawesi island (Suharto et al., 2018b), Bangka (Nuraeny et al., 2018), and Yogyakarta (Agustina, 2017). As a matter of fact, the sociability aspect of traditional Indonesian houses enhances with the provisioning of the guest bedroom, as established in Sulawesi and Bangka. The functionality of verandah in traditional Indonesian house is

also currently indispensable in terms of disease prevention. Zoning concept with verandah as front zone to accept outside guests could also role as a buffer zone from outside to inside house (Putra, 2020). Furthermore, provisioning of cleaning facility in buffer zone helps disease prevention.

Gender Based and Islamic Value Influence

The distribution of domestic spatial for sociability also in consideration of gender to protect women's privacy. The gender-based spatial arrangement also leads to zoning, as prior studies have noted that the front house is men's territory and receives guests outright. The traditional houses of West Java and Yogyakarta are several reports that have shown that the guest receiving zone is located in the men's area (Darmayanti, 2016) (Ju et al., 2018b). A strong relationship between gender-based spatial arrangement and Islamic value has been reported in the literature (Idham, 2021). The study reported that guests were received in the men's area to protect women's privacy while women guests could be received in the women's area or a more private room.

2.7.3. The Values in Housing Orientation

The housing development discourse is inseparable from dwellers' respective cultures, beliefs, habits, and geographical areas. Traditional housing contains those elements and respects the environment without ignoring dwellers' needs or the genius loci. The value of genius loci has been lessened by the modernism movement's misunderstanding of the style while disregarding local wisdom (Trisno et al., 2020). A design process that involves locality from the climate, culture and even recent local issues will lead the design to the spirit of the place (Salura et al., 2020). By contrast, the Indonesians' ancestors had years and beyond of experience in creating buildings that were suitable to local conditions geographically and culturally. The dialogue surrounding green

buildings emphasises thermal comfort, frequently scapegoating orientation and simply shifting it to avoid the solar direction. Hence, a study of locality in traditional housing is required to establish a proper framework for housing and to support sustainability issues. Even though it is not only limited in the housing subject, implementation of locality is almost certain to improve the quality of life for dwellers and their environment.

The multiculturalism of Indonesia as an archipelago country generates a plenteous rule when it comes to housing; in the realm of architecture, this multiculturalism enriches the style, material, and philosophy of the current context of traditional housing. The ancestors affix philosophy as orthodox rules to be obeyed by dwellers. As time went by, these orthodox housing rules faded and were almost abandoned by the current dwellers as modernism penetrated the lexicon of architecture. Hence, traditional housing values are needed to study the evidence of past lifestyles (İpekoğlu, 2006), and holistic study is required to prevent a chaotic understanding of the orientation of traditional Indonesian housing. Differences in the culture, beliefs and geography of Indonesia will lead to additional divergence in the understanding of housing orientation. Research has noted that culture is the identity of a society and is inseparable from its tradition (Ratunar Rahmatullohet al., 2020). Attention to regionality value is an effort to preserve local architecture and is adaptable to users through a strategic design approach (Purbadi et al., 2020).

Preliminary study regarding orientation value in Indonesian traditional houses found that: natural features, sacred space and beliefs, main access, Qiblah, thermal comfort, and disaster prevention influenced the traditional orientation of Indonesian houses. One exciting finding is that Natural features underlie the housing orientations in a variety of places. In addition, the archipelago culture engenders various ancestor

civilisations and practices. The keywords of housing orientations are elucidated broadly in the following parts.

Natural Features

In the literature outlined above, eight studies indicated that Natural features affected the orientations of traditional Indonesian houses. The floating Lanting houses on the Melawi River, Kalimantan, are built simply facing the land and the river (Putro & Zain, 2021). The sun, as a natural resource, also affects the orientation of housing in Eastern and Western Sumatra. The Talang Mamak tribe of Eastern Sumatra and the Minangkabau of Western Sumatra consider sunrise to be a source of goodness (Faisal & Wihardyanto, 2020; Gunawan et al., 2019). Other evidence showed that orientation of traditional Korowai settlements used to considered the sun, but current Korowai houses follow the river path (K. R. Kurniawan et al., 2020). Meanwhile, the Balinese consider orienting their houses along the axis between the mountains and the sea to embody respect for Natural features (Putra et al., 2021; Nurjani, 2020; Agung Diasana Putra et al., 2019;Subroto & Malangyudo, 2014).

Sacred Spaces and Beliefs

Historically, research has shown that sacred spaces affect the orientation of traditional Baduy houses. The entire house should be facing *kidul* (south), where *Lalayang Sasaka Domas* (the Baduy sacred space) is located (Nuryanto et al., 2021). Research by Naing and Hadi (2019) stated that the Buginese people in Tulengen Village avoided making their houses face north because they considered that direction to be less good. East and south are the dedicated wind directions for Bugis houses, with east symbolising fertility and enthusiasm for life, while facing the south brings a comfortable experience (Naing & Hadi, 2020). Traditional Javanese houses also emphasise the north–south axis in their orientation; however, not all Javanese regions employ this

cosmological axis. Two classified Javanese societies: *Abangan,* and *Santri*, have distinctions in housing rules (Ju et al., 2018b). *Abangan* means "red", referring to Javanese Muslims with syncretic beliefs related to animistic and rural aspects, while *Santri* refers to orthodox Muslims with Islamic purity practices related to Islamic life and market (Idham, 2018; Ju et al., 2018). Inland Javanese *Abangan* tend to build their houses following the rule of the sacred south–north axis to respect the South Ocean Goddess (Santosa, 2019). While the south axis also considers the royal palace to be a symbol of a ruler or leader in the microcosm realm (Suprapti, 2014). Lastly, the literature review also found that a particular wind direction as housing orientation differs considerably from belief in Tongkonan houses, Toraja (Manurung, 2017).

Main Access

Previous research has established that Kampong (a traditional urban settlement) in Semarang looked to the river for its orientation; this river used to be an essential transportation route in Semarang (Rukayah et al., 2021). Traditional houses in South Sumatra and Lampung (among other regions of Sumatra) are oriented based on main road access (Susilo & Nalaralagi, 2015). Research conducted by Idham (2018) also reveals that the diversity of Javanese housing brings variety in layout, façade, and orientation; several northern coastal areas of Central Java tend to build housing without any special consideration but main access to the street. In addition, main access as housing orientation also occurred in the Greater Jakarta region and in Central Sulawesi among these tribes, Betawi, Kaili, and Bugis-Makassar (Rahmadina & Lukito, 2020; Suharto et al., 2018). Slightly different in the West Kalimantan region, traditional houses were oriented toward the river for transportation access; among the local Malays, houses are close to the river even though they do not strictly face it (Zain & Andi, 2020).

Qiblah

Before Islam came to Indonesia, Hinduism, Buddhism, and animism grew around the archipelago; hence, the Indonesian ancestors' house orientations symbolised the beliefs and myths and the appreciation of their ancestral culture. As Islamic culture came and was received, people adjusted their housing elements, including orientations. Buginese people tend to build their houses toward Qiblah, which is considered a sacred orientation among Muslims (Naing & Hadi, 2020)(Izziah et al., 2021).

Thermal Comfort and Disaster Prevention

There are few examples of how traditional Indonesian houses considering their house orientation for indoor comfort and disaster prevention. Javanese houses in several areas tend to be oriented to the south due to the breeze off the coast, rather than for mythical reasons, as was believed about *Abangan* houses (Idham, 2018). Apart from this natural cooling system, consideration of wind direction is noticed in Old Bugis traditional houses. The Buginese designed their house orientations to face west–east following the wind direction, to avoid damage (Madeali et al., 2018). Another example, *Amu Hawu,* a traditional house in East Nusa Tenggara, has a north–south orientation to avoid the typhoon hazard from east to west (Fanggidae et al., 2019). Concern about strong wind is also why traditional Aceh houses are oriented to the east or west to protect their roofs (Asriningpuri, 2020).

2.8. Student Housing

Student housing (SH) is one important building facilities in universities to accommodate students in provisioning settlement with certain criteria, such as short distance to campus, homogeneity occupants' affiliation, and study needs. The SH has a significant function of a building in a university to support students' outcome of their university phase. The outcome of a higher education institution influences its

academicians and societies surrounding (Beringer et al., 2008). Thus university plays role as an agent of change for society in terms of education, social, and environment. In order to achieve those aims, the development of a campus must be well-planned and sustainable. Master planning of a campus reflects the vision of its future development and crucially for sustainable environment (Swearingen White, 2003). Formerly, design and planning of a university illuminates civic art form and is reflects the social, cultural, and philosophy (Coulson et al., 2015). Furthermore, Coulson (2015) expand the current three basis fundamental aspects in campus planning to achieve physical, social, intellectual, and sustainability challenges, encompass: landscape and buildings.

Landscape

Well-planned landscape provisions a great encountered experience to campus tour and strengthen the campus plan, directing the routes, and reflecting the character of its institution. The existence of landscape in university planning also expressing the orientation of the institution to the nature and locality value to the climate (Coulson et al., 2015). Furthermore, campus landscape promotes an important connections to biodiversity conservation, perceptions of natural heritage, and ecological literacy for academicians and communities (Kermath, 2007). In terms of reducing gas emission, the existence of landscape is believed able to promote outdoor recreational and mobility by walking and cycling. Apart from that, outdoor activity promoted by landscape also enhance the social life and physical and mental health (Bergquist et al., 2019). In addition, holistic planning of landscape in universities encourage students to live sustainably and preparing them to facing any sustainable issues in their future workplaces (Swearingen White, 2003).

Buildings

Open spaces and the buildings are inseparable aspects that establish the identity of the university. Unarguably, buildings that perform their functions and respond their

contexts are strengthen the masterplan of the campus. Buildings reflect the identity of the university through its architectural items such as material, style, scale, and so forth (Coulson et al., 2015). The development of campus should consider inter-buildings connection to support sustainability in environment, promote walkability environment, reduce the gas emission, and as the live environmental teaching for students (Swearingen White, 2003). The buildings in the planning of campus including academic buildings, administrations, and supporting facility buildings. The academic buildings including classrooms, laboratories, and libraries. Whilst administration buildings including staff and lecturer offices, department, faculty, and university offices. Furthermore, supporting building such as student housing, sports complex, and other leisure activities in campus.

The existence of student housing as a supporting building in a university often considered as the indicator of well-established university with complete student facilities. For students, SH help them to ease the commute between campus and residential, remain focus in study without wasting time in traffic and less money spent in residential off-campus rent fee. For university, provisioning SH contributes in gaining students' academic achievement, achieving campus rank, decrease the traffic congestion in campus area, and obtaining campus rank (Lacerda & Valentini, 2018). Several studies unveil that the demand of student housing shows increasing and encountering the low number of student housing available (Brookfield, 2019; McCann et al., 2020). Those issues emerge student housing as an interesting object to be studied for the whole aspects involving students, campus, and environment surround the campus. The following section will unveil the studies of student housing between 2017 to 2022 and scrutinize to arise the prominence issues of student housing.

2.8.1. Issues of Student Housing

Researchers ultimately determined that the presence of student housing influenced several concerns pertaining to the social, economic, and environmental sectors. Student housings generate a significant amount of positive influence, but they also present some issues that ought to be investigated in order to ensure the provision of sustainable student housing in the future. The project investigates problems associated with student housing in a number of different nations. Topics covered include studentification, spatial concerns, and sustainable living.

2.8.1.1. Studentification Area

Studentification is a condition of change in an area affected by the existence of a university in that area and the number of unaccommodated students for in-campus residential that caused a change in the spatial arrangement of the area. The few availability of student housing often facing the massive number of registered student in a university. Thus, student housing provided by university unable to accommodate the whole students for in-campus accommodation. This situation emerges expansion of private student housing in an established neighbourhood and affect the population of non-student residents (Brookfield, 2019). In addition, the condition of studentification in a neighbourhood also as the implication of improper student housing provide by campus that makes students to seek better, cheaper, and proper off-campus settlement (McCann et al., 2020). Another entity of studentification is traffic congestion around campus in the certain time due to commuting students towards and off from campus. Commute students contributes to the massive usage of vehicles and impacting to traffic congestion around the neighbourhood (Sargisson, 2018).

However, studentification does not always contributes to harm effect of neighbourhood, as it shares the beneficial influence and profitable outright. The expansion of unaccommodated students considered as an opportunity to increase the income for neighbourhood residents to rent their property for student accommodations (Sanderson & Özogul, 2022; Yilmaz et al., 2022). In the other hand, off-campus accommodations provides a diverse option for students based on their preferences, such as room privacy, inexpensive reasonably priced, and facilities of the unit (Kobue et al., 2017; Magni et al., 2019; Verhetsel et al., 2017).

2.8.1.2. Spatial Issues

The inquiry about spatiality in student housing is inevitable from the improvement and evaluation studies from the current and previous occupants. The study can determine the preference, and performance of the building from the perspective of occupants experience during their stay in student housing. Study on the preference of the student housing can unveil the building manager to evaluate what students' need and expect of an in-campus settlement (Kobue et al., 2017) and determine the approximate rent fee they can afford (Verhetsel et al., 2017). Furthermore, spatiality issue in student housing unveil some other aspects encompass design and facility management. Some universities designed their student housings perfunctorily with functionality without design consideration. In fact, student housing contributes to design of campus landscape, naturally accommodate students as its function, and prevent harmful impact of studentification to society surrounding (Domingo-Calabuig & Lizondo-Sevilla, 2019; Zamora i Mestre, 2019). Furthermore, scholars has found that design in student housing is considering interior, privacy, and zoning. Interior elements redound to create convenience and homey feeling to occupants. Cultural element things in interior

contributes to create "feel at home" and enhancing social connectedness between occupants in multi user room (Breunig et al., 2021). Contribution in interior design for dormitory also beneficial for health, especially the occupants with special needs. Proper interior design will help them to overcome the social situation and creates comfortable feel (Tackx et al., 2022).

Another aspect in design is privacy which also determine the comfort condition of student housing, particularly for plentiful unit of student housing in a block. Privacy is not merely preserving the confidentiality from others, but also securing the assets (Adisa & Simpeh, 2021). Thus, privacy with security is part of facility management which should be adhered by the management for the students' convenience (Simpeh & Akinlolu, 2021). The appropriate privacy mechanism allows students to have great experience of staying in student house and determine their performance in academics and social life (McCartney & Rosenvasser, 2022). However, student housing is different with private apartment unit which put privacy forward among all aspects. Student housing should also facilitate students to socializing and create a social connectedness among other occupants. Hence, a study argues that public and private spaces in student housing should find the balance in design and needs (Awal, 2022).

2.8.1.3. Sustainability in Student Housing

The provisioning of student housing is inevitable to sustainability issues, particularly for its building, as the global issue to be concerned for all people. Student housing always contributes as the interesting variable object to be studied due to involving man and environment. Consideration in sustainability concept to the student housing provides a direct lesson learned for students to experience a more sustain way of life, beneficial for university as provider of student housing to earn good building performance, and fruitful for environment to reduce the harmful footprints (S. Attia et al.,

2020; Botsaris et al., 2021). During the certain period year of studies, scholars were concerning waste management and building performance. Staying in student housing shares a huge impact to students' life and influence their attitude towards real life after uni-days. Thus, it such a significant chance for university to provide a long-life experience for students to build their behaviour in sustainability. Regarding to this issue, scholars have found that implementation of proper waste management in student housing influence students' habit in recycling the goods towards waste reduction (Söderberg et al., 2022). It turns out that waste reduction of student housings not only contributes to students' sustainability behaviour, but also reducing gas emission to process the wastage in a municipal level.

Building performance becomes the most concern studies regarding to student housing conducted by scholars. To date, several studies have investigated retrofitting, energy consumption, and thermal comfort. Retrofitting is the theme in building performance which closely related to recycling. Reusing the existing building in order to reduce the carbon footprint generated from the development of new building or demolishing the existing building (Cascone & Sciuto, 2018; Elnagar et al., 2021b) . The process of retrofitting involving the feasibility study to examine the building performance in terms of thermal comfort and energy efficiency (Elnagar et al., 2021a). To achieve the thermal comfort of an existing building, studies employed computer simulation such as Sketchup with Sefaira tools (Elnagar et al., 2021a, 2021b), building information modelling with Autodesk Revit (Olanrewaju et al., 2019), or even direct measurement with experiment (Freewan et al., 2022; Lolli & Lien, 2019).

2.8.2. Typology of Student Housing

For university students, residential life in dormitory is an integral part of campus experience. Thus, current universities are competing to provide best residential facility

for their students aims to achieve that experience and obtain improvement academic accomplishment. Past studies as expanded in previous sub-chapter about issues of student housing by scholars were intended to improve the service and experience in student housings. Student housing, like common housing with certain types, contemplating the basic needs of dwelling, spatial organization, density, and patterns of built areas and open space (Neuman, 2013). According to Neuman (2013), the following below is the types of housing in higher educational institution.

- Residential college : a comprehensive cluster of residential, social, and academics facilities into a complete college. This complex also equipped with semi-enclosed outdoor space.

- Residence hall : a generic model of dormitory consists of single or multiple occupancy rooms on a path. This type of student housing usually apply shared bathroom with certain ratio occupants for each floor. Other communal facilities are provided such as kitchen, study room, or lounge.

- Suites : shared occupancy of several private rooms with shared facility of furnishing, bathroom, and living room. This type is similar to apartment/house but usually without kitchen.

- Apartment housing : commonly for upper-class students or faculty staff which allows its occupants to have their own private rooms with enclosed bathroom and small kitchen. Usually consists of one bedroom for single user or multiple bedrooms for family occupants.

- The house : similar to residence hall but in form of house building and cn be occupied by 30 or more students.

Student housing is an investment for social sustainability for students as the next generation of leadership successor. The significance of student housing is believed to

facilitate the students in cultural diversity experience which strongly applied to Indonesian that consist of numerous cultures, races, and traditions (Huda & Ariffaturakhman, 2021; Thahir, 2014; Wiyatasari et al., 2022). Hence, ideology for student housing should prioritizes the social interaction among students through examining the social constructed nature of the students (Yanni, 2019). In the planning process, student housing equipped with some communal spaces to enhance the social connectedness among occupants. Those communal spaces including indoor such as kitchen, study room, lobby, or even corridor. While outdoor area including garden, courtyard, and parking space.

To current development, there are vast style of student housing plans, but to simplify, commonly there are staircase or entryway and double loaded corridor plan model (Yanni, 2019). Staircase plan provides a staircase for several unit groups of student housing and need no single entry door to reach the units. A staircase-plan student housing has no centralized main entrance or front desk. This model requires multiple staircases in a building that might costly but offers freedom to occupants in entering or leaving their units. Students circulated up and down to their units on their own staircase group unit. This model suitable for male students who desire freedom of circulating the unit without any front-liner guard in the main entrance. In contrast, the double-loaded corridor plan is suitable for the occupants who requires high privacy and security during their stay in student housing. This model recommends a main entrance door with front-liner desk to control the circulation and observe the guests. Furthermore, this student housing model suitable for female students that demand more privacy management than male. The double-loaded corridor then becomes a standard model for student housing either for female or male students. Following figures is the example of staircase and double-loaded corridor student housing plan.
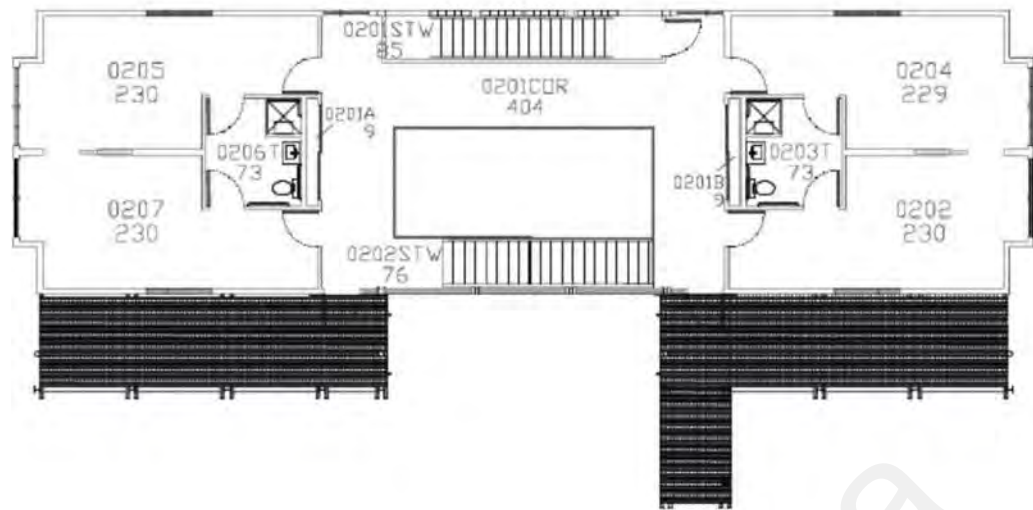
Figure 2.2 Staircase model student housing (Neuman, 2013)

Figure 2.3 Double-loaded corridor model student housing (Neuman, 2013)

2.8.3. Student Housings in Indonesia

The total number of students of college age in Indonesia is quite significant, and there is a diverse selection of colleges and universities in the country. This enormous number of students presents both an opportunity to establish a successful student settlement business and a challenge in terms of the provision of adequate housing for students. The possibility to provide student housings opens the door for members of the surrounding community to generate additional income by renting out their homes, rooms, or other properties to students. As was discussed in the prior part of this chapter, the problems that are plaguing student housing in Indonesia are probably similar to those that are plaguing growth in other parts of the world. The primary problem is that the educational institution does not offer sufficient on-campus housing for its students. As a result, studentification is recognised as a problem in Indonesia since there is an inadequate supply of on-campus student accommodation.

Student accommodation in Indonesian educational institutions is provided by the government through the Ministry of Public Works and Housing (MPWH). This does not just include universities; it also includes other types of educational institutions, such as Islamic boarding houses and Pesantrens. The provision of student housing by MPWH through a grant programme, in which schools are required to supply land space and managerial teams in order to operate student housings, with MPWH taking care of the pre-construction and building phases respectively. In spite of this, the grant programme for student housing provisioning from MPWH could never meet the requirements for student housing. In order to alleviate the accommodation shortage that exists for students, established universities would construct their very own student housing. As a result, there

is a never-ending problem with studentification area in Indonesia because there are not enough on-campus student housings.

2.8.3.1.   *Rumah Susun Sederhana Sewa* (**Rusunawa**)

Housing for students is provided by the Ministry of Public Works and Housing (MPWH) through a programme known as Rumah Susun Sederhana Sewa (Rusunawa), which simply translates to "rented modest storey house or flat." According to the Ministerial Regulation of Public Work and Housing 14/Permen/M/2007 concerning the management of rent flat, on the verse 1 number 1 of the document, it was stated that: Rusunawa is a storeys building that was built by state revenue budget and consists of some structured functional horizontally or vertically and each is being utilised separately by rent scheme and functioned as settlement. Rusunawa was named after the Rusunawa people, who lived in the area when the building was constructed. On the other hand, Rusunawa developed communities in metropolitan areas that had low incomes. Slum area communities, members of the Military Force or Police, employees, mixed users, and boarding educational institutions are some of the groups that have been designated by the government as being eligible to rent Rusunawa through the MPWH.

According to MPWH, a boarding educational institution is any school for general education, vocational education, religious education, or integrated education that requires its students to live in a dormitory. This can include religious schools. Hence, the Rusunawa Dorm is constructed for students of schools and universities, as well as santri (student of Islamic boarding-educational institution). In addition, Rusunawa can be constructed as a settlement that can be used as financial assistance or a subsidy for the purpose of housing workers or educators for a period of five years. Student rusunawa are typically reserved solely for students who are not married and do not have children, although designated staff rusunawa can be provided for either singles or families. The

conditions that educational institutions must meet in order to be eligible for the Rusunawa Grant Scheme are outlined in the MPWH., including:

A. Registered institution,

B. Accredited by the Ministry of Education and Culture,

C. Minimum total students between 800-1600,

D. Minimum total staff for *rusunawa* staff :

o 110 staff for higher education

o 60 staff for boarding educational institution

2.8.3.2. Spatial Planning of Student Housing / Rusunawa

According to the design guideline from MPWH, student housing has several types of room and certain facilities to support the functionality of student housing. Those room types and facilities are:

1. Main building

Generally, there are two or three types of units in a student housing built by MPWH. The types of settlement units in student housing can be listed as follows: $21m^2$, $28 m^2$, $36m^2$, and $45 m^2$. Each units has bedrooms, guest room, living room, kitchen, toilet, front and rear balcony. However, most student housing units are 21/28 m^2 consist only bedroom with multiple beds, communal kitchen and living room are outside the unit and multiple shower and toilet rooms are grouped to ease the maintenance.

2. Supporting areas

This part of student housing building consist of lobby to receive guest, can also be functioned as TV room. Part of lobby also functioned as mailbox and guard office, and becomes buffering room for outsiders and occupants before entering the student housing.

3. Communal kitchen

   The communal kitchen can also be a facility to enhance the social connectedness between students where they can meet other occupants while cooking. This facility is also an optional which some student housing prefer provide catering service or canteen rather than communal kitchen for hygiene and easy maintenance.

4. Health facility

   Mini health clinic with practitioner and nurse to facilitate occupants' health. However most university has in-campus clinic and located in the campus area, then this facility is an optional for student housing.

5. Business stall

   Student housing has rent spaces functioned for daily necessity store, pharmacy, or any trading activity to fulfil occupants' need and empowering small business enterprise in that building.

6. Praying room

   This facility is to fulfilling religious need of occupants, usually musholla/surau provided in a building.

7. Open space

   Sport facilities such as multifunction courtyard, parking area, and garden are provided as basic and recreational facility that can also enhance the social connectedness among occupants.

2.8.4. Student Housing in Indonesian Islamic Universities

Because Islamic institutions also play a part in the supply of student accommodation on university campuses, they are eligible for the student housing grant scheme that is administered by the Ministry of Public Works and Housing (MPWH). The same issue, a shortage of affordable accommodation for students, is a concern that is

experienced by Islamic educational institutions as well. As a result, there is a greater student population in the neighbourhood that surrounds the university. As a consequence of this, only a select few qualified students who meet certain requirements can be housed in on-campus student accommodation, while the remaining students choose to live in off-campus settlements of their own accord. This is because there are only a limited number of on-campus student accommodations available. In addition, the provision of student housing at Islamic universities should be strongly encouraged as a means of offering total support for the Islamic value that is being taught. This is one way to provide total support for the Islamic value that is being taught. As a consequence of this, the concept of Islamic Student Housing, sometimes referred to as ISH and commonly abbreviated as ISH, is quite different from the conventional conception of student housing that is typically seen in general universities. The provision of Islamic life experiences and Islamic extracurricular activities to pupils is a primary focus of Islamic residential high schools (ISHs).

2.8.4.1.   The Urgency of Islamic Student Housing

Pesantren, also known as an Islamic boarding home, is the oldest Islamic institution and has a significant impact on the educational landscape of Indonesia. The concept of pesantren is also regarded to be a potential alternate answer for the many educational issues that exist today (Thahir, 2014). In the past, traditional pesantren just offered a boarding house together with an informal Islamic educational curriculum that did not lead to a degree. Pesantrens today, on the other hand, are already provided with formal educational institutions ranging from primary school to junior high school and even senior high school. Some of the more well-known pesantren often have universities affiliated with the institution that they founded. The proliferation of pesantren in Indonesia is indicative of the fact that the majority of Muslim families in the country

select this option as the primary option for the education of their children in terms of Islamic instruction. In addition, the presence of pesantren is often welcomed by the community because it has a positive influence not only on the individuals who attend the school but also on the community as a whole (Mustafa et al., 2018). Hence, the concept of *pesantren* applied to student housing in Islamic universities as precedent of Islamic based educational boarding house.

The modular design that is similarly applied to conventional universities is the root of the issue with regard to the provisioning of ISH by MPWH. Most of the time, the floorplans of student housing at Islamic universities and regular universies are nearly identical. Sometimes the only distinction is the facade, which could include embellishments with an Arabesque design or green walls on the exterior. In point of fact, ISH with additional Islamic activities require further consideration in the building layout, such as a sacred area for prayer and other design features to emerge with an Islamic atmosphere (Firmansyah, Ismail, et al., 2020). In addition, research on Islamic principles concerning the establishment of communities have to be carried out in order to ensure the complete and correct implementation of Islamic architectural principles in Islamic student housing. Improvements in students' academic achievement and excellent behaviour towards becoming better Muslims are sparked by careful planning and the implementation of Islamic ideals in ISH facilities (Firmansyah, Shaari, et al., 2020) (Muchlis et al., 2019).

2.8.4.2. The Teaching Concept of Islamic Student Housing

The teaching paradigm in pesantren, which was the earliest kind of Islamic education used in Indonesia, is quite similar to the one used in Islamic student housing at universities. This concept, which is still important to the educational climate today, is being preserved by pesantrens of varying models, from the traditional to the modern.

There are five essential components that must be present in a pesantren that have been preserved up to now: *Kyai*, a mosque, *santri*, and a lodge in addition to a book (Thahir, 2014). *Kyai* is the title given to the educator and head of the pesantren. *Kyai* is traditionally male and has the title of most senior Islamic scholar. The pesantren mosque is the primary location for doing the prayer of shalat, learning about Islam, and engaging in any other sort of religious activity. Students who attend classes at a pesantren are referred to as "*santri*," regardless of whether or not they live on campus or return home each day. During their time in pesantren, *santri*s are required to live in a lodge, which may also be referred to as a hostelry. Lastly, the term "book" refers to the Islamic reference books, which often include educational material on Islamic sciences and are written in Arabic or another classical language. These components make up the fundamental framework that is utilised in the student housing of Islamic educational institutions. Yet, there are a few aspects that might not be all that comparable, such as a mosque that is typically situated in a university but is not specifically designated there and is positioned close to student dormitories. The utilisation of the mosque at the university as a result of the positioning of student accommodation within the campus area and within close proximity to the already established mosque. The figure of Kyai can also be altered to take on the role of an Islamic instructor, who is more commonly referred to as ustadz. The ustadz is often a lecturer in the Islamic studies faculty at the university that recognised his expertise in Islamic science.

2.9. Theoretical Framework of The Study

After examine thoroughly about the main concept of Islamic architecture and locality of Indonesian housings, then, this section scrutinize the concept of Islamic architecture briefly according to literature strengthen with Quranic verses. Afterwards,

discussion of the scrutinization of locality value in traditional Indonesian houses briefly. This section is will emerge theoretical concept as the starting point of the inquiries conducted in the case study with participants.

2.9.1. Islamic Architecture in Housing

A coalition of understanding of Islamic architecture generally and Islamic architecture in housing generates a comprehensive Islamic architecture concept. The concept applies to any housing, either landed or vertical, ownership, or rent, so it applies to student housing as the study's primary locus.

2.9.1.1. Design Foster Faith

Significance understanding of Islamic architecture is an architecture derived from Islamic values and dedicated to Muslims. Hence the design is expectedly fostering Muslims' activities in practicing their religious activities. Thus, criteria design fosters faith includes: functional in design, enhance faith and humility. The design fosters faith as the implementation of reminders for Muslims to remind God everlastingly, precisely the purpose of humankind's creation to worship Allah.

"*I did not create jinn and humans except to worship Me.*" (The Quran 51:56)

- Enhance Faith   : the design is expectedly always enhance *Tawhid* concept Oneness of God and enhance faith, thus the house caters function of human on earth to worshipping Allah and performing faith or *ibadah*.

- Functional   : the development the house should consider the latest technology for best performance, and accommodate the function of a house to unwind from outside world.

- Humility   : the design should avoid profligacy, avoiding objects human or animal like statues or pictures, and prioritize social values over glorifying objects.

2.9.1.2.   Promoting Green Building

As caliph on earth, humankind expectedly lives *rahmatan lil alamin* or spread mercy to all. In practices, Muslims' wise in creating their built environment is compulsorily considered. In this occurrence wise in using natural resources. Minimising the usage of unrenewable resources and maximising the renewable natural resources. Restriction of unrenewable resources generates an eco-friendly built environment and committing to preservation outright. While maximising the renewable resources reflects humility and decreasing waste effect. Thus, Islamic architecture responds to Islamic thought to not damage the environment.

"*Do not spread corruption in the land after it has been set in order. And call upon Him with hope and fear. Indeed, Allah's mercy is always close to the good-doers.*" (The Quran 7:56)

- Eco Friendly   : encourage the local sustainable architecture concept to respecting the site, prevent the damage for environment, and human safe.
- Cleanliness and Zero Waste   : promoting cleanliness as implementation of Islamic thought and produce

2.9.1.3.   Social Connectedness

Kinship is a habitude of Muslims, and maintaining kinship is obligatory for Muslims, which all Muslims are family. Hence, Muslims are ordered to visit each other and treat their guest well. The social connectedness in Muslim houses is reflected in provisioning spaces to honor the guests without privacy breaches.

"*Has the story of Abraham's honoured guests reached you, O Prophet? ....* (The Quran, 51:24)

2.9.1.4.   Maintaining Privacy

Studies revealed privacy is the most discussed factor in Islamic architecture, in which privacy is closely related to occupants' secure feel. The implementation of privacy can be applied in zoning arrangement, material selection, and openings consideration, which are most studied. Related to secure feel, privacy in Islamic architecture affiliated to guests' appreciation to host. Hence, greet the hosts before entering their house is compulsory to guest in Islamic thought.

"*O believers! Do not enter any house other than your own until you have asked for permission and greeted its occupants. This is best for you, so perhaps you will be mindful."* (The Quran, 24:27)
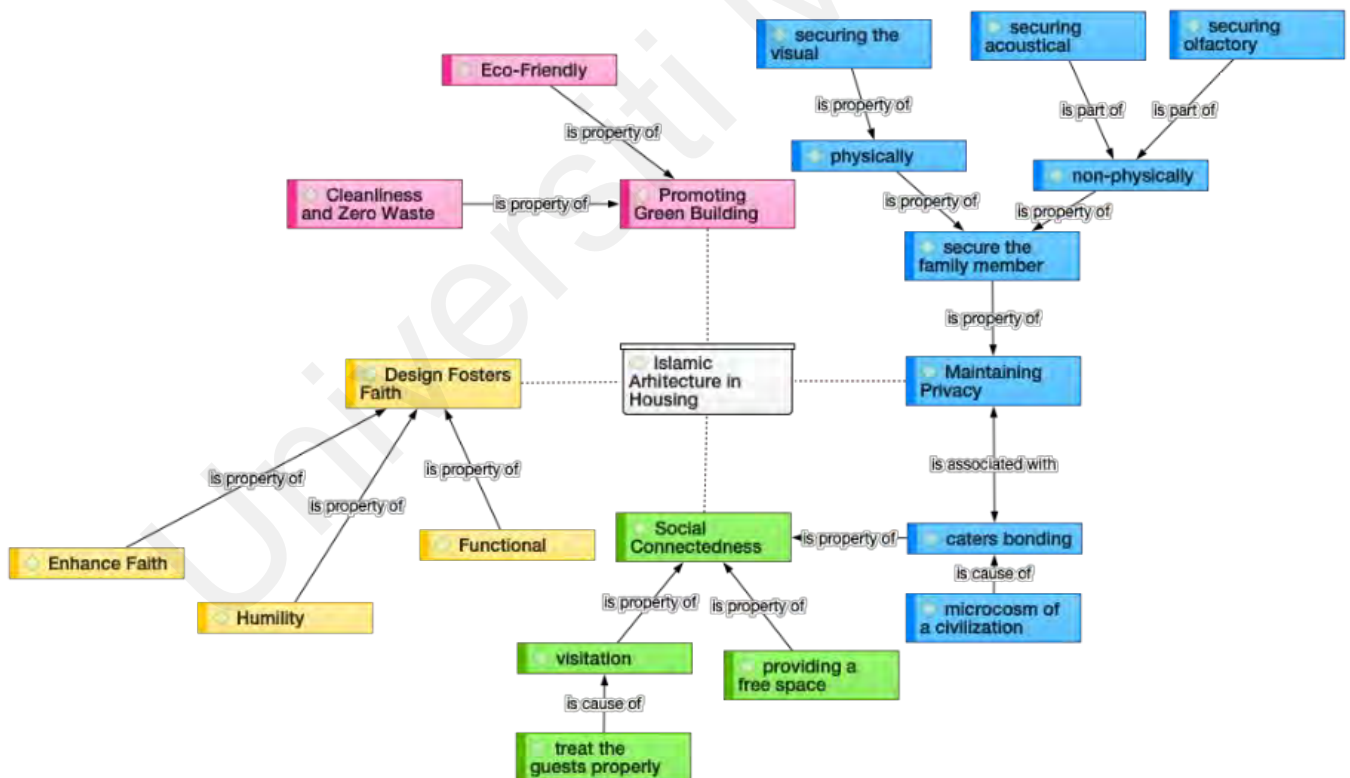
Figure 2.4 The chart of Islamic architecture in housing

2.9.2. Housing Values of Indonesian Housings

A comprehensive understanding from literature review regarding traditional Indonesian houses emerges a concept of locality aspects. The elaborate of the aspects are being expanded below and followed by **Figure 2.3** is the chat of locality of traditional Indonesian houses.

2.9.2.1. Privacy

Privacy in Islamic houses is highly respected, and the core value of privacy in Islamic architecture is to provide a safe shelter for the family from outside (Omer, 2010a)(Othman, 2016). Well-maintained privacy will escalate the intimacy and comfort for dwellers (Kameli et al., 2016) and promote ethical behavior for children toward their parents (Babangida & Katsina, 2018). Even though publications provided in the literature review outline are not whole taken from Indonesian Islamic culture, the concept of privacy is urgent to be studied to establish the value of a locality in privacy.

The use of separator/ divider, height adjustment for building elements, clear zoning division, and space agreement are intended to protect women (mother, wife, and daughters) from unlawful sight. At the same time, the selected material of the wall is intended to diminish acoustic privacy breaching. Thus, building layers of rooms as transitional space and distinction entrance is intended as a screen for the house owners to their guest. The majority of privacy values from traditional Indonesian houses are intended to protect women dwellers and constitute ethics to respect the house owner. Although traditional houses of Indonesia prevail in strict privacy, the fundamental characteristic of Indonesian in sociability is well preserved. In other words, maintaining privacy is intended to receiving and treat the guest decently without diminishing the secure feel of dwellers. The presence of guest rooms in traditional houses of Indonesia should be a consideration to not abolish in current housing design. Hence the sociability

characteristic of Indonesian will be well maintained. Furthermore, physical and non-physical privacy values embodied in traditional Indonesian houses also in line with the Islamic architecture concept.

2.9.2.2. Sociability

The sociability aspect in traditional Indonesian housings describe the acceptance of Indonesians to the guests. Indonesians believed that guests as the special people in the house at certain time and deserve a best treat from house owner. The apparent finding to emerge from this study is that the sociability mechanism in traditional Indonesian houses contained some advantages, purposes, and meanings. The unique finding in the sociability mechanism of traditional Indonesian houses is the advantage of earthquake-proof construction. Furthermore, some spatial functions were changed to accommodate guests and pursue the sociability aspect. The social status of the guests also influences the mechanism of sociability, particularly to respect the honorary status of their guests. Another sociability mechanism is the implementation of zoning to accommodate guests adequately and maintain the owner household's privacy. Lastly, the sociability mechanism is closely related to gender-based and Islamic values, in which spatial arrangements protect and provide a proper space for women.

2.9.2.3. Orientation

The preliminary study argues that the various orientations of traditional Indonesian houses are based on considerations of nature, main access, and belief. The 'nature' consideration comprises respect for Natural features, use of wind for personal comfort, and prevention of strong winds. The ancient Indonesians used to be farmers and fishermen; thus, the utilisation of Natural features immensely affected their lives. Natural understanding was also one of their capabilities, which allowed us to consider nature to

101

prevent damage. Then, the 'main access' consideration simply refers to houses that are oriented toward transportation access, as is common nowadays. Current dwellers apply this concept to orient their houses towards the road for practical design. The 'belief' consideration encompasses orientations based on ancestral beliefs, the locations of sacred spaces, and the influence of Islamic Qiblah orientation. The animist and ancestral beliefs found in traditional Indonesian housing culture are applied in current housing design. The growth of Islam in Indonesia established the role of housing orientation towards Qiblah.

Previous research has established that locality emerge from an organic architecture compromising culture and natural adaptation (Rasdi, 2008). Thus, locality values in housing orientation from those Indonesian traditional houses offer some adaptability mechanism in natural condition towards utilizing natural resources wisely. Nature plays a role in respecting natural resources, utilising wind for thermal comfort, and preventing strong wind. The ancient Indonesians used to be farmers and fishermen; thus, the utilisation of natural resources immensely affected their lives. The natural understanding was also one of their capability, which they understood how to conquer nature to prevent damage. Consideration of wind for cooling system and disaster mitigation are mechanisms to understanding the site properly. Then orientation toward main road or transportation access is how locality value of Indonesian traditional houses ease the dwellers and even the guests to reach the house. The main access determines the housing orientation as common housings nowadays, which simply oriented the house façade towards the transportation access. The current dwellers apply this concept to orient their houses towards the road for the practically and functionally in design. The rest, research found that beliefs influence the establishment of housing orientation. Beliefs, as last findings, encompass the location of sacred spaces, ancestor beliefs, and the influence of Islam in Qiblah orientation. The animism and ancestor beliefs turn to a traditional

Indonesian housing culture and apply in current housing design. The growth of Islam in Indonesia established the role of housing orientation towards Qiblah. In this term, Islamic architecture should foster The Oneness of God and avoiding other beliefs. Hence, Qibla orientation is acceptable for this case. However, blending and respecting other culture is also on Islamic thought. Thus, orientation to a certain direction as existing neighbourhood did is only intend to uniformity. Not for following their culture, nor their beliefs.

2.10. Conceptual Framework

In the approaching part of research, this study employs a hybrid approach which combines inductive as the natural of grounded theory and deductive to sparks the thematic sensitivity. Hybrid approach allows the researcher to identify obviously how themes were generated from raw data to reveal the meaning pertaining to performance feedback for the participants (Fereday & Muir-Cochrane, 2006). Hybrid approach is believed fruitful in search of meaning in the context of data research. The natural of deductive as theory-driven constructs is capable to identify the different implementation issues (Bonner et al., 2021), while inductive as data-driven provides a fresh raw-material from participants that contains a comprehensive meaning to be constructed for a new theory (Lee et al., 2011). Hence, the position of this conceptual framework is becoming the theme of the data collection of this study.

The conceptual framework is a collection of overarching statements, arguments, and concepts that structure the research (Bloomberg & Volpe, 2018). In light of the aforementioned literature analysis, it is possible to think of the conceptual model for this inquiry's Islamic architecture. A predetermined interpretation of Islamic architecture that has already centred on its application for ISH in accordance with the values of Indonesian locale in dwelling. The Islamic architecture required to make it functional is consistent

with the value of universality, which may be implemented wherever based on local culture, custom, and behaviour, so long as Islamic sharia law is not violated (Indrawati et al., 2016; Omer, 2019). The universality contained in Islamic architecture becomes the starting place to investigate the dwelling values of Indonesian for the data gathering and focused of research. In addition, the literature review study revealed that Indonesian dwelling values include three aspects: privacy, sociability, and orientation. These three aspects constitute the focus of the research and the basis for the data collecting.
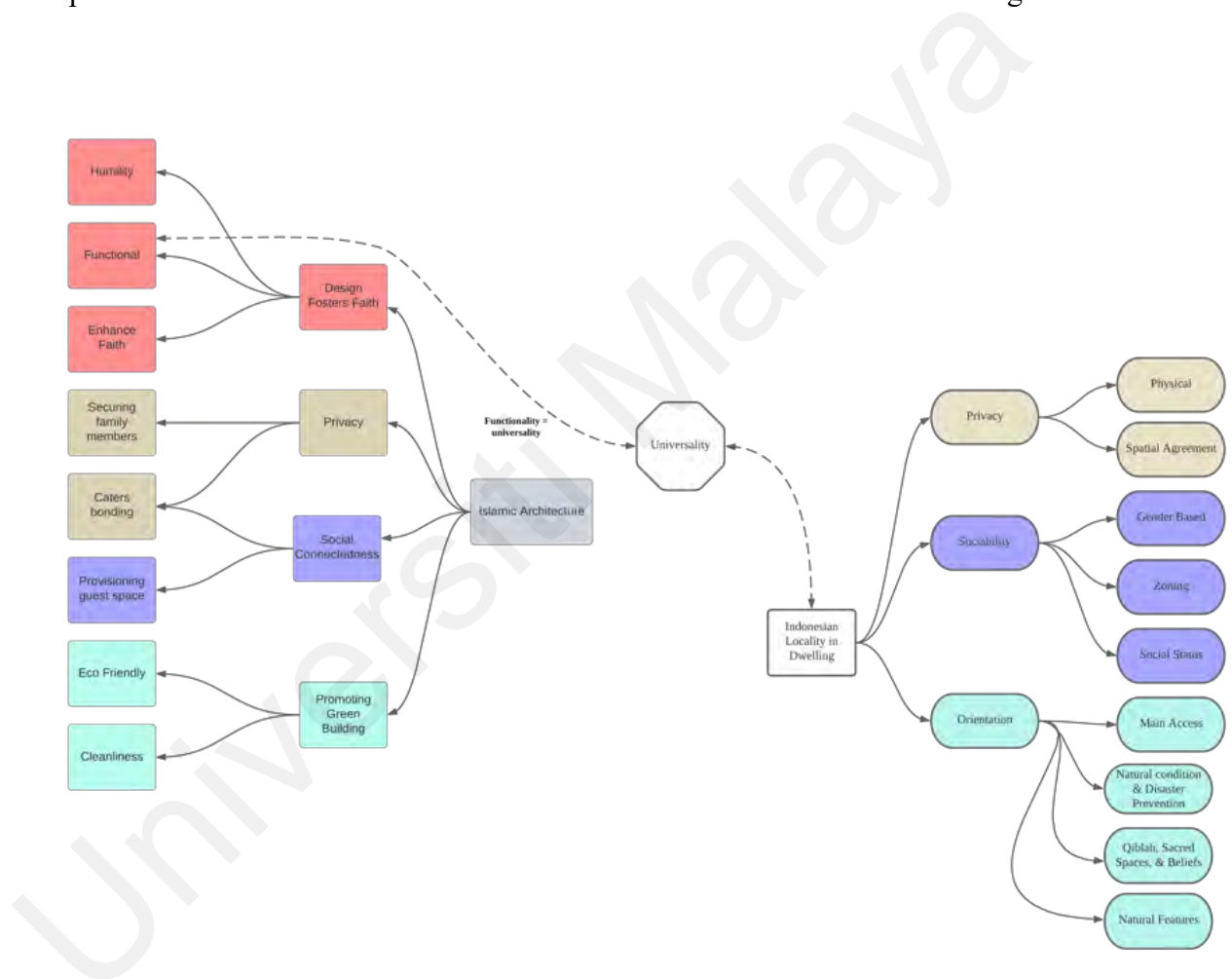
Figure 2.5 Conceptual framework of the study

2.11. Conclusion

The conclusions of this chapter led to the conclusion that the value of Islamic architecture is comparable to the value of the neighbourhood in which traditional

Indonesian dwellings are located. Traditional houses in Indonesia exhibit many of the characteristics that are central to Islamic design, such as a focus on sociability and respect for the individual's right to privacy. Yet, one's support of Arabic culture does not automatically indicate endorsement of Islamic architecture, despite the fact that Islamic architecture is derived from Islamic concepts. The Islamic religion first took root and flourished inside the Arabic civilisation. In Islamic architecture, the idea of universality refers to the acceptance of local culture as an essential component of civilisation. This is a central tenet of Islamic design. In order to conduct an accurate investigation of Islamic architecture in Indonesia, the first focus of this study will be on determining the meaning of Indonesian locality values as they pertain to housing. This will be done so that the investigation can then proceed to investigate Islamic architecture in Indonesia.

In addition, the results of this research reveal that locality values in traditional Indonesian dwellings offer three characteristics that are especially noteworthy. The following characteristics are included: privacy, sociability, and orientation. Those characteristics are main aspects of this study that emerged as the theoretical framework of the study. The aspects of privacy, sociability, and orientation also become the theme for the FGD in the study and other data collection rpcess to complete the study.

CHAPTER 3 METHODOLOGY: CONSTRUCTIVISM GROUNDED THEORY

3.1. Introduction

The technique that was used in this study, including the collecting and analysis of data, will be discussed in this chapter of the methodology. This chapter also elucidates the more general philosophical approaches of qualitative analysis, as well as which approach was used in this particular research. In addition, this chapter elucidates the workings of grounded theory as a strategy for accumulating the data, as well as the stream of grounded theory this particular research endeavour utilises. This chapter also includes instructions on how to analyse the data by using the Atlas.ti programme.

3.2. Difference Methods in Student Housing Research

According to study carried out between 2017 and 2022, doing research on student housing uses a variety of methods. These methods are determined by the research aims as well as the availability of data. During that specific year, quantitative research had the greatest number of users and was used extensively in a variety of data gathering and analysis methodologies. While qualitative research utilises a wider variety of data

collection and processing techniques, quantitative research is used more frequently. In conclusion, the least expensive way is the mix-method, which combines multiple different techniques for data collection and analysis. These method distributions were derived from a total of forty Scopus publications using the search key "student housing" and the use of several filters. The distribution chart of methodologies utilised in student housing studies from 2017 through 2022 can be found in figure 3.1.
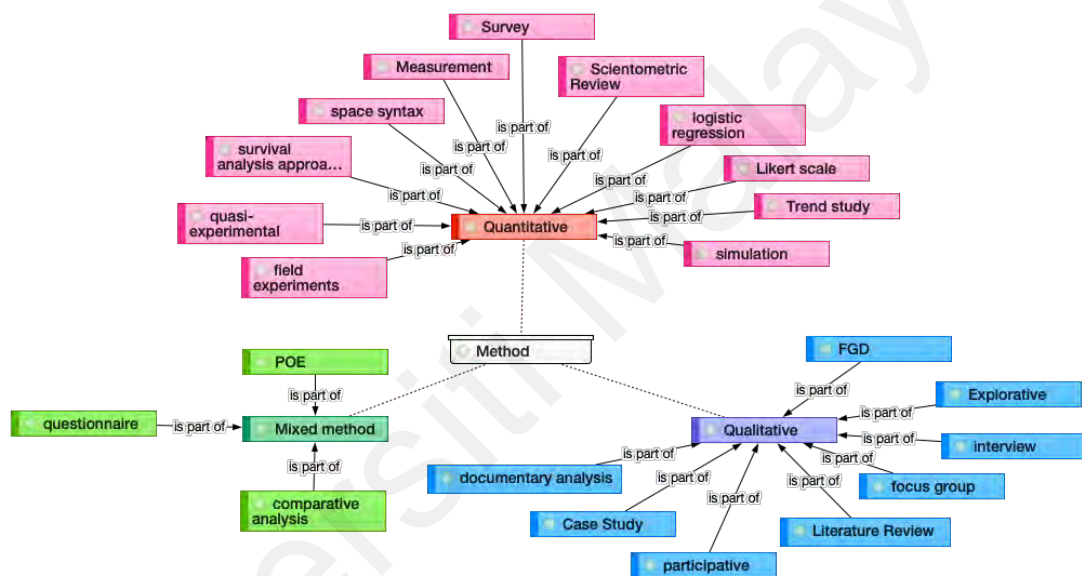
Figure 3.1 Distribution of research methodology in student housing studies between 2017 – 2022

3.3. Qualitative Approach

The method adopted in this research is qualitative since it is most suitable for comprehending the meaning of social issues and for involving participants in the collection of specific data (Creswell, 2013). In addition, qualitative research is not simply a method of investigation that does not rely on statistical analysis; rather, qualitative research is advantageous because it helps researchers understand the phenomena that are

experienced by research subjects in a holistic manner by describing them naturally (Moleong, 2011). Since that Islamic architecture is a collaborative endeavour involving a large number of people, the aforementioned definitions provide credence to the study's qualitative selection. In qualitative research, sampling is followed by particular techniques, such as an interview with open-ended questionnaires, primary and secondary data, and then the collected information is analysed before being presented in the form of narratives and tables to facilitate personal interpretations (Creswell, 2009).

Furthermore, the nature of qualitative research has several approaches to guide the researchers in conducting their inquiries. Firstly, assumption approach encompass ontology, epistemology, and axiology (Spencer et al., 2014). Following are the differences of each assumption approach:

Table 3.1 Variation of assumption approach

	Ontology	Epistemology	Axiology
Function	Discussing in terms of beliefs, universal truth, and objectivity	Process of gaining knowledge, on "how we know and what we know"	Concerning researcher's assumption that influence the inquiry
Special usage	Anthropology, cultural psychology	-	-
Goal	Capturing the distinction between experience-near understanding of culture and human experience	Enhance the trustworthiness of the findings by offering several perspectives in the inquiries	Researcher's assumption as the contribution to the knowledge

In other side, philosophical approaches can also be the guidance and structure of qualitative research. Those philosophical approaches including post-positivism, constructivism, advocacy/participatory, pragmatism (Creswell, 2009). The Table 3.2 below is the brief explanation about philosophical approaches in qualitative research.

Table 3.2 Variation of philosophical approach (Creswell, 2009)

Post-positivism	Constructivism	Advocacy/ Participatory	Pragmatism

Determination	Understanding	Political	Consequences of actions
Reductionism	Multiple participant meanings	Empowerment issue-oriented	Problem-centered
Empirical observation and measurement	Social and historical construction	Collaborative	Pluralistic
Theory verification	Theory generation	Change-oriented	Real-world practice oriented

During preparation for an inquiry, researcher require a strategy to provide specific direction in data collection phase. Qualitative research has several strategies for data collection that can be selected based on the nature, objectives, or the data availability of the research. Creswell (2009) offers five strategies inquiries to obtain data in research, encompass narrative research, phenomenology, ethnographies, grounded theory, and case study. Table 3.3 below explains inquiry strategies of qualitative research.

Table 3.3 Variation of inquiry strategy of qualitative research (Creswell, 2009)

	Definition
Narrative research	Studies about the lives of individuals. The research is retold by the researchers and provides dual insight, from researcher and individual itself.
Phenomenology	Identifying the essence of human experiences about a phenomenon described by participants. Participants experiences above researcher's knowledge to obtain the natural data.
Ethnographies	An inquiry studying a cultural in a certain natural setting by collecting, primarily, observational, and interview data. The research process is flexible and evolves as encountering field's realities.
Grounded theory	A strategy of inquiry generates from participants' views to be emerged as the abstract theories. Theoretical sampling is the achievement of this strategy.
Case study	The researcher explores deeply about a program event. Activity, process, or one or more individual. The case raised in the inquiry bounded by time and activity and collects a variety of data collection procedures over a sustained period of time.

Subsequently, this study's qualitative method uses grounded theory as a study strategy that commences from theories to generate research questions, resulting in theories to be compared (Groat & Wang, 2013). By employing grounded theory, the

109

researcher can streamline the data collection and construct original analysis from data collection (Charmaz, 2006). Grounded theory engages four categories to acquire data, including open-ended response interview, observation, artefacts & sites, and archival documents (Groat & Wang, 2013). Raw collected data undergo coding based on the theme and respondents' description toward description then interpretation (Creswell, 2009).

3.4. Grounded Theory

Grounded theory developed by Glaser and Strauss is an analysis method, not a collecting data method which allows researcher to develop a theory based on case study and occur on the field (Corbin & Strauss, 2014). This method is suitable in architectural realms which attempt to understand a socio-cultural of groups with diversity in behaviour, practices, and cultural background. This analysis method helps the researcher to forestall the opportunistic use of theories which uncertain fit and working capacity (Glasser & Strauss, 2006). This method offers a learning about participants' lives and analyse thoroughly and systematically to generate a theoretical analysis and new concept in the discipline outright (Charmaz & Thornberg, 2021). Grounded theory provides a rigorous, vigorous, and intuitive approach, and a complete procedure from obtaining to analyse data for wide variety of architectural research objectives (Bollo & Collins, 2017).

The distinguishes of grounded theory from other approaches is immensely need researcher's sense in determining the sufficient data. Hence, grounded theory prioritize quality over the quantity, saturation over the quantity sample, and researcher's intuitive over the analysis program result. Thus, this method prerequisites a well-done understanding of a case before starting data collection. Grounded theory recommends the researchers to begin an inquiry with general set of research interest and developed to become a sensitizing concept as a point of departure for interview questions and discussion material with stakeholders including participants or interviewers. Difference

stakeholders may require a distinguish questions to reach a robust data in interview and discussion process. Hence determination process in type of stakeholders should also be a rigorous process in selection. Upon the set of data collection process, a set of analysis procedures is undergone by researchers to emerge a theory developed from field. Preparation before collecting data by developing literature for inquiries, data collection set, and analysis process.

As a result, the qualitative approach used in this research makes use of grounded theory as a study strategy. Grounded theory is an approach that begins from theories to produce research questions, which ultimately results in theories that can be compared. The researcher is able to expedite the data collection process and generate innovative analysis from the data collected when grounded theory is utilised in the research.

3.5. Constructivism Grounded Theory

The purposes of research can be achieved using Constructivism Grounded Theory (CGT) proposed by Kathy Charmaz (Charmaz, 2006) where researcher's role is to construct rather than discovers the theory (Sebastian, 2019). The CGT befits critical qualitative inquiry as a contemporary version of Grounded Theory developed by Glaser and Strauss (Charmaz, 2017). The CGT believed to solve the problematic data with layered nature and encountering in different cultures of participants to emerge a meaning (Charmaz & Belgrave, 2019). This research will encounter participants with various culture, habit, and their own life rules towards meanings to a study concept and purposes. Hence, CGT is believed capable to emerge an interpretive understanding of subject's meanings' (Gibson & Hartman, 2014). In the approaching part of research, this study employs a hybrid approach which combines inductive as the natural of grounded theory and deductive to sparks the thematic sensitivity. Hybrid approach allows the researcher to identify obviously how themes were generated from raw data to reveal the meaning

111

pertaining to performance feedback for the participants (Fereday & Muir-Cochrane, 2006). Hybrid approach is believed fruitful in search of meaning in the context of data research. The natural of deductive as theory-driven constructs is capable to identify the different implementation issues (Bonner et al., 2021), while inductive as data-driven provides a fresh raw-material from participants that contains a comprehensive meaning to be constructed for a new theory (Lee et al., 2011).

3.6. Data Collection

The data required in CGT are closely related to interview and focus group discussion, but the study which involving experience life of its participants often includes supplementary data such as documents, diagrams, maps, and photographs (Bollo & Collins, 2017; Charmaz, 2006). Grounded Theory requires rich data gathering with various type of data according to research question and where the researcher goes with it (Charmaz, 2014). Rich data means openness and empirically learning participants' experience (Charmaz & Thornberg, 2021). So, in order to respond to the research aim of this study regarding the experiences of students while living in student housing, these data are required:

Table 3.4 List of data required based on Research Questions (RQs) and Research Objectives (ROs)

RQs	ROs	Data Required
What is the Islamic architecture values with the Indonesian spatial approach in housing?	To identify the Islamic architecture values with Indonesian spatial approach in housing	Literature review
How is the current practices of Islamic architecture in Islamic student housing occupants of selected research locations?	To investigate the current practices of Islamic architecture in Islamic student housing occuapants of selected research location	- FGD with students - Secondary data : Existing floor plan, SH conditions, photos
How to develop framework of Islamic student housing in Indonesia using Islamic architecture values as an approach?	To develop a framework of Islamic student housing in Indonesia using Islamic architecture values as an approach	Result and interpretation of RQ2

In addition to primary data, this study also needs access to secondary data in order to improve the empirical aspects of the research. It is reasonable to assume that the function of secondary data is to supplement the primary data and provide the researcher with assistance in the process of developing an analytical story. The actions taken by the researcher in their quest to find meaning are reflected in the secondary data. As a result, such detailed data would be used to create an analytical tale, which would serve as the primary focus of constructivism grounded theory (Charmaz & Belgrave, 2019). It will be easier to comprehend the experiences of participants if photographs of the present condition of student housings, including both the exterior and inside of SH, are provided. In addition, other documents already in existence from the SH office will be used to support the study. The researcher is better able to comprehend the students' lived experiences as a result of the researcher having access to building technical papers like an existing floor plan.

3.6.1. Focus Group Discussion

The Constructivism Grounded Theory (CGT) presupposes that the Focus Group Discussion is an emergent interaction and a mutual exploration of the experiences and perspectives of the participants. The CGT also assumes that the interview's processes, including questioning, listening to, and following up with the participants, are crucial aspects to construct quality data (Charmaz, 2020; Charmaz & Thornberg, 2021). Unquestionably, Focus Group Discussion the primary method for collecting qualitative data, and require perspectives from participants (Bollo & Collins, 2017). The information needed for the study will be gathered from a wide range of participants; for the purpose of this project, the participants will be students living in Islamic student housing. Students

will be divided into small groups and asked to role-play as residents of Islamic Student Housings for the purpose of participating in a focus group discussion. Thus, the Focus Group Discussion is the best approach to collect data from the participants, who are a group of student occupiers. Nonetheless, a few carefully chosen students in their sophomore or senior year continue to reside in the ISH and take on the role of leader for each incoming batch of students. Participation from senior students is essential in order to collect data on the experiences that students have had while in SH because senior students typically stay in SH for longer periods of time. It is customary for interviewees and interviewers to exchange their experiences and learn from one another's perspectives. In order to facilitate the analysis phase and make use of the data analysis application Atlas.ti more effectively, the data concerning conversations are now being recorded.

3.6.1.1.   Participants Criteria

The research calls for the statements of the participants as the primary data of qualitative research and the natural of Constructivism Grounded Theory (CGT). Due to the large number of students that participated in the study, the interview procedure included Focus Group Discussions (FGD) with those students. This helped to reduce the amount of time needed for the process. In its most basic form, the natural of CGT declares that there is no evident minimum number of participants required for quantitative research. The number of participants who are considered adequate for the study will be decided based on how well theoretical sampling is saturated. FGD with students prior to the start of their stay in ISH in order to collect rich data on their experience there. Students of this senior level or those in their second year who live in ISH are expected to participate in FGD. Notwithstanding this, the research develops a scenario for the possibility that the process of collecting data may encounter an insufficient number of qualified student participants who have specific staying experience. In addition, the majority of ISHs are

reserved for first-semester students, and only a limited few senior students who have prior experience or who have been chosen stay in ISH. There are very few senior students living in either the female or male ISH buildings at any given time. The majority of them remained in the first year, and they were chosen based on certain achievement criteria that were determined by the university. Students in their senior year who have been at the university for numerous years can present an engaging tale regarding the question.

3.6.1.2. Additional Procedure

Focus group discussion is undoubtedly a component of grounded theory, but it occasionally encounters several difficulties, one of which is shy participants who are unable to articulate their responses independently (Gibbs, 1997). In the case of FGD participants who participated passively, the study included the additional procedure. Participants distributed paper questionnaires for completion. This method collects information from participants' perspectives without verbal communication. By employing this method, the study can collect sufficient data in a single FGD session, and participants can participate independently without feeling intimidated.

3.6.2. Secondary Data

In its search of rich data, this study not only employed Focus Group Discussion, but also utilised some data for concept development and evidence collection (Charmaz & Belgrave, 2019). Charmaz (2023) augments her study data with observation and secondary data, such as photos and videos (Vann Ward et al., 2023). The position of secondary data in architectural research is to visualise the data and give the clear meaning of participants' statements based on the actual fact in the site (Kurniawaty et al., 2022; Murray-Davis et al., 2023; Shelby et al., 2022). Consequently, in order to support the participants' statements from the FGD, gathering secondary data are used to complete the research. Secondary data provide silent facts that speak even louder than FGD data.

Students' day-to-day living activities as inhabitants, students, roommates, and housemates in Islamic Student Housings are revealed by the actual conditions in the research settings.

In addition, secondary data are anticipated to include documents such as the existing floor plan of Islamic Student Housings (ISH) and photographs of the research area, including the interior and exterior conditions of ISH and student activities as the focus of the study. The floor plan drawing derived from the on-site survey and measurements, as the ISHs lack floorplan blueprint documents. The information from the floor plan layout used to explain the placement of student activities within the facility. Additionally, a floor plan to illustrate the location of student activities where photographs were not permitted in specific areas of ISH. While photographs were taken of the students' activities, the conditions of ISHs, and the data gathering process while they were in ISHs. Undoubtedly, the participants and ISH managements authorised the photographs.

3.6.3. List of Questions in the FGD

The study will include the participants both male and female from four selected Islamic student housing in Semarang. The participants involved are the senior students or occupants who stayed in the second year. This assumes the staying experience from participants rather than the new students or first year occupants. The questions involving the experiences in Islamic student housing including. The following table is the list of questions in the questionnaire sheet shared to the participants. The study will encompass both male and female participants from four carefully selected Islamic student housing complexes located in Semarang. The participants will specifically include senior students, or residents who have completed at least one year of their academic program, with a particular focus on those who are currently in their second year of study. This criterion is intended to ensure that the participants possess sufficient lived experience within the housing environment, distinguishing them from first-year students who may not yet have a comprehensive understanding of the housing conditions. The research will explore various aspects of the participants' experiences living in Islamic student housing, with the survey questions designed to capture detailed insights into their perceptions and

experiences. The following table outlines the list of questions included in the questionnaire distributed to the participants for data collection.

No	Question	Category
1	What is your room number? *Berapa nombor bilik anda?* <u>*Berapa nomor kamar anda?*</u>	Personal information
2	What do you know about Islamic Architecture? *Apa yang anda tahu mengenai Senibina Islam?* <u>*Apa yang ada pahami mengenai arsitektur Islam?*</u>	Understanding
3	According to your opinion, does this Islamic University's student housing has applied the Islamic Architecture concept? Why? *Menurut pendapat anda, adakah perumahan pelajar Universiti Islam ini telah menerapkan konsep Senibina Islam? Kenapa?* <u>*Apakah menurut anda asrama/rusunawa dari Universitas Islam ini telah menerapkan Konsep Arsitektur Islam pada bangunannya? Mengapa?*</u>	Statement
4	According to you, should this dormitory apply the Islamic Architecture concept? Why? *Menurut anda, haruskah asrama ini menerapkan konsep Senibina Islam? Kenapa?* <u>*Menurut anda, wajibkah asrama/rusunawa ini menerapkan Arsitektur Islam? Mengapa?*</u>	Statement
5	What kinds of worship do you do in the room? *Apa jenis ibadah yang anda lakukan di dalam bilik?* <u>*Ibadah apa sajakah yang anda lakukan di dalam kamar?*</u>	Personal information
6	Where do you usually pray in congregation? *Di manakah anda biasanya solat berjemaah?* <u>*Di mana anda biasa melakukan shalat berjamaah?*</u>	
7	Can you perform pray in congregation in the room? *Bolehkah anda menunaikan solat berjemaah di dalam bilik?* <u>*Dapatkah anda menunaikan sholat berjamaah di dalam kamar?*</u>	
8	Do you practice space agreement with roommate? How are the agreement? *Adakah anda mengamalkan perjanjian ruang dengan rakan sebilik? Bagaimana perjanjian itu?* <u>*Apakah anda melakukan kesepakatan penggunaan ruang bersama teman sekamar? Bagaimanakah kesepakatannya?*</u>	Space agreement
9	Does space agreement limit the interactions between users? Why? *Adakah perjanjian ruang menghadkan interaksi antara pengguna? Kenapa?*	Space agreement

	Apakah kesepakatan ruang membatasi interaksi antar pengguna? Mengapa?	
10	How do you and roommate maintain social connectedness even though each has a private space? *Bagaimana anda dan rakan sebilik mengekalkan hubungan sosial walaupun masing-masing mempunyai ruang peribadi?* *Bagaimanakah cara anda dan teman sekamar dalam menjaga kedekatan walaupun masing-masing memliki ruang privasi?*	Social connectedness Hospitality
11	Where do you usually receive the guests in the dormitory? *Di manakah Anda biasanya menerima tetamu di asrama?* *Di manakah Anda biasa menerima tamu di asrama?*	
1	How do you apply privacy in private space during your stay in this student housing? *Bagaimana anda menerapkan privasi di ruang peribadi semasa anda tinggal di perumahan pelajar ini?* *Bagaimanakah anda menerapkan privacy pada ruang privat selama menghuni asrama ini?*	Private space
11	According to you, how are the criteria of space which adequate the privacy? *Menurut anda, bagaimana kriteria ruang yang memadai privasi?* *Menurut anda, bagaimanakah kriteria ruang yang memenui syarat privasi?*	Private space
8	How do you establish privacy in multi-user room? *Bagaimana anda mewujudkan privasi di ruangan berbilang pengguna?* *Bagaimana anda membangun privacy pada kamar dengan lebih dari satu penghuni?*	Private space
9	What building elements do you think have an effect on maintaining privacy in the room? *Apa elemen bangunan yang anda fikir mempunyai kesan menjaga privasi di dalam bilik?* *Elemen bangunan apa sajakah yang menurut anda berpengaruh dalam terjaganya privacy pada kamar?*	Private space
13	Where is your room window direction? *Di mana arah tingkap bilik anda?* *Menghadap manakah jendela kamar anda?*	Window direction
14	Do you feel comfortable with intense light through your room window? Why? *Adakah anda merasa selesa dengan cahaya yang kuat melalui tingkap bilik anda? Kenapa?* *Apakah anda nyaman dengan intensitas cahaya yang masuk melalui jendela kamar anda? Mengapa?*	Bioclimatic

15	How do you overcome the over-intense light through your room window?	Bioclimatic
	Bagaimana anda mengatasi cahaya yang terlalu kuat melalui tingkap bilik anda?	
	Bagaimana anda mengatasi cahaya berlebihan yang masuk ke dalam kamar melalui jendela?	
16	Does your current window capable to reduce lamp usage during the day? Why?	Bioclimatic
	Adakah tetingkap semasa anda mampu mengurangkan penggunaan lampu pada siang hari? Kenapa?	
	Apakah jendela kamar anda saat ini dapat mengurangi penggunaan lampu pada siang hari? Mengapa?	
17	Does your current window capable to reduce lamp usage during the day? Why?	Bioclimatic
	Adakah tetingkap semasa anda mampu mengurangkan penggunaan lampu pada siang hari? Kenapa?	
	Apakah jendela kamar anda saat ini dapat mengurangi penggunaan lampu pada siang hari? Mengapa?	
18	According to you, does your current room window is suitable for the local climate? Why?	Bioclimatic
	Menurut anda, adakah tingkap bilik anda sekarang sesuai dengan iklim tempatan? Kenapa?	
	Apakah menurut anda jendela kamar saat ini telah sesuai dengan iklim setempat? Mengapa?	

3.7. Analysing The Data

The research then goes through the natural analysis of Grounded Theory, which includes coding, drafting memos, focused coding, and theoretical saturation. This is done after the empirical collection of rich data (Charmaz & Thornberg, 2021). This research makes use of the data analysis application Atlas.ti to generate emerging codes, memos, and focused codes, which then assists the researcher in locating theoretical saturation. Atlas.ti is able to analyse a wide variety of research document types, including pdf documents, jpeg pictures, and mp4 recordings of voice and audio. So, in order to simplify

the analysis of in-vivo data and the process of drafting memos, the scripts for the recorded interviews and focus groups will be written out.

3.7.1. Coding

First step of coding process is line-by-line coding to forces the researcher to observe the fresh data (Charmaz & Thornberg, 2021). This method of coding is for the purpose of understanding the experiences and perspectives of the participants, as well as gaining the researcher's perspective on the subject matter knowledge of whether or not the data would fit. The codes on the documents should differentiate from one another and indicate the qualities or characteristics being reflected. The following step is to link one set of codes to another set of codes. The linkage relies on the interpretation of the participants or even an assumption that is not explicitly stated. The sensitivity of the researchers is therefore absolutely necessary for study with CGT.

Memo Writing

Memo include discussion of code and is an intermediate phase between coding and writing the initial draft (Charmaz & Thornberg, 2021). The purpose of the memo in GT is to provide more conclusive and analytical information from codes to draughts, as well as to provide assistance for the researcher so that they may build quality into the study. The researcher is able to think analytically because they are not under the same amount of pressure as when they are writing on the paper. Note writing served the purpose of preserving the researcher's instant ideas while they were coding, and it also outlined the hypotheses that were derived from the study (Bollo & Collins, 2017).

Focused Coding

Following the line-by-line coding step, the research then moves on to the focused coding step, which is responsible for defining the most notable and significant codes. Codes, subcodes, and related information are all included in focused coding, which also

explains more than other types of codes. During this stage of the analysis, the researcher uses Atlas.ti to better understand how different codes interact with one another and to construct a code that is more tightly focused on a category (Charmaz & Thornberg, 2021).

Theoretical Saturation

The concept of saturation is dependent on the ability of researchers to pause and reflect during the phase of a study in which they are collecting data and doing analysis (Bollo & Collins, 2017). In addition, theoretical saturation is achieved when more data are collected, but the categories do not take on any more qualities or characteristics. The theoretical saturation improves the overall quality of the study by enhancing the analytical capabilities of the researchers and supplying the research with solid material (Charmaz & Thornberg, 2021). In a nutshell, CGT asserts that there is neither a maximum nor a minimum number of participants in interviews; nonetheless, the data collecting will be halted once the analysis of the data reaches a point of saturation.

3.7.2. Cross Analysis

The cross analysis combines FGD data with secondary data for a specific line of inquiry (Murray-Davis et al., 2023). In addition, combining FGD data and secondary data from the current condition of the research site might aid the researcher in conceptualising the design for future proposed designs (Burke & Veliz-Reyes, 2021). This level of analysis allows researchers to validate participant comments against the current condition of the ISH in which they resided. The cross analysis visualises the data and clarify the significance of participants' responses based on site-specific facts. As a result, this analysis is used to complete the research in order to support the FGD participants' claims. In furthermore, this degree of analysis recounting the silent data from FGD regarding ISH circumstances must be investigated and expanded for the research findings.

3.8. Research Flowchart
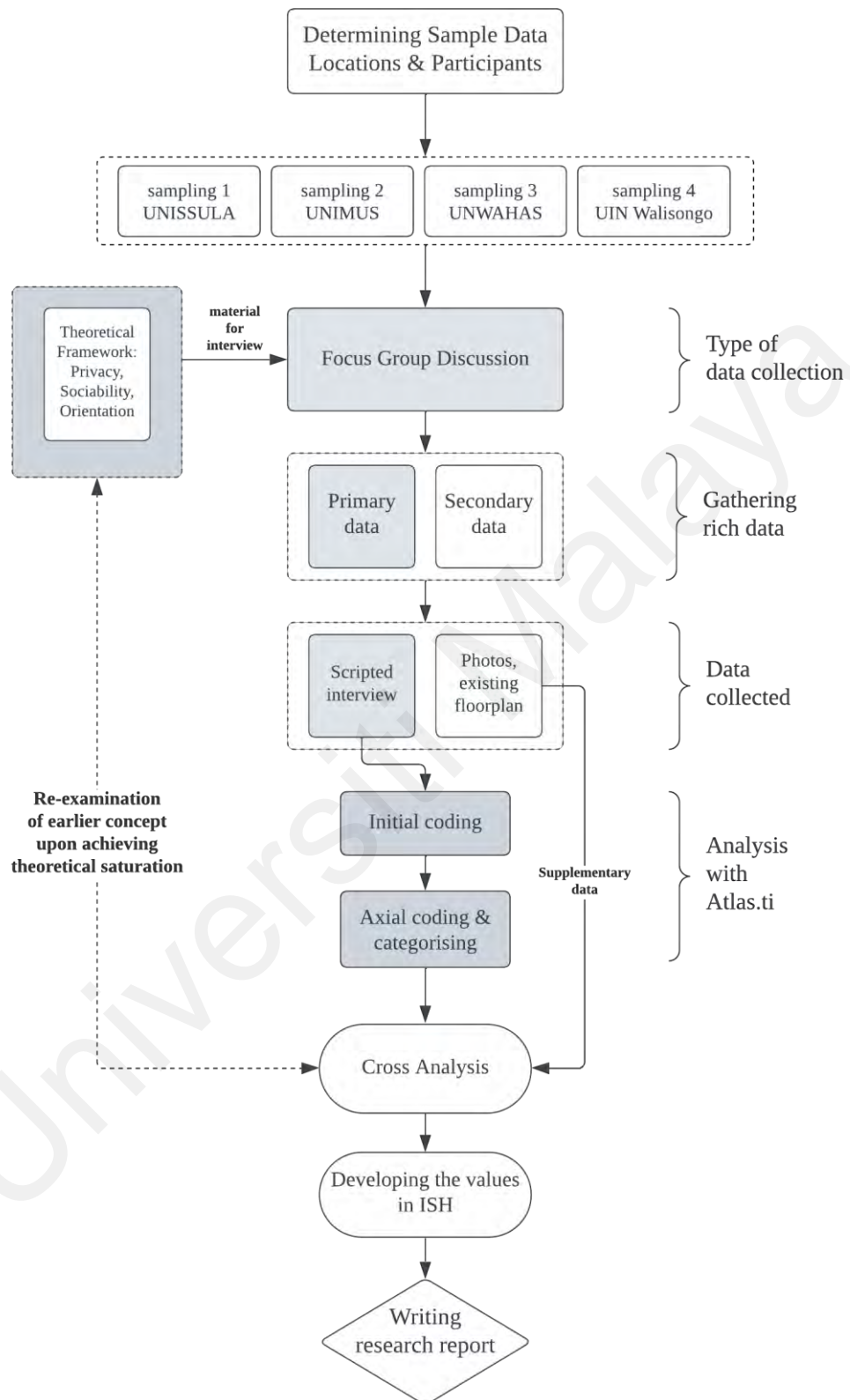
Figure 3.2 Research Flowchart

3.9. Limitation of The Study

There were several limitations encountering during the study, particularly during the data collection and analysis. The limitations are as follows:

- Limitation in health protocol. During the movement restriction in pandemic condition, some universities implementing hybrid or fully online study. Hence, the number of dwellers in SHs drastically decrease due to most of them were returning to hometown. Then, the study will maximize the rest of students residing in SH and some SH managers as well.

- Limitations of participants. Student participants as SH dwellers are mostly first year students, only few number of senior students residing in SHs. This is caused by room shortage with high demand from students, then the rule prioritizes the new students and selected senior students. Thus, the study prioritizes senior students as participants as their staying experience in SH rather than new students.

- Limitation of gender restriction. The study takes place in SHs with highly gender restriction for visitor. To cope this situation, researcher hires female surveyor to observe the interior of female SH. Nevertheless, this issue is a limitation for researcher which unable to observe directly in female SHs.

3.10. Summary

To achieve the aim and objectives, this study is qualitative research and uses constructivist philosophical approach. Furthermore, constructivism grounded theory employs as strategies of inquiry and prominently obtaining data with open-ended question in a focus group discussion and personal interview. The role of researcher is to collect participants' meaning and construct to emerge theoretical as the significant of this study.

123

In addition, this is a hybrid approach study which combines inductive and deductive which believed to ease the researcher and participant in data collection phase.

Table 3.5 Outline of research and data collection method

Research Method	Qualitative: to understand the meaning of social problems and involve participants in gathering specific data
Philosophical approach	Constructivism: to understanding an issue which generated from selected multiple participants' meanings, with socio-cultural observation, to emerge a theory
Data collection	Literature review, FGD, secondary data
Analysis method	Constructivism Grounded Theory : to understand a socio-cultural of groups with diversity in behaviour, practices, and cultural background. This method offers a learning about participants' lives and analyse thoroughly and systematically to generate a theoretical analysis and new concept in the discipline.

CHAPTER 4 RESEARCH LOCATIONS

4.1. Introduction

This chapter discusses the findings of this research, including the city in which the case studies were conducted, the selection of four Islamic universities, a concise profile of each university, and a focus on the Islamic student housings at those universities (ISHs). Those four Islamic universities encompass, Universitas Islam Sultan Agung (UNISSULA), Universitas Muhammadiyah Semarang (UNIMUS), Universitas Wahid Hasyim (UNWAHAS), and Universitas Islam Negeri Walisongo (UIN Walisongo).

4.2. Data Location

The study takes place in the city of Semarang as the capital city of Central Java Province, Indonesia. Semarang is a coastal city is directly adjacent to the Java Sea in the northern part of the region. Figure 4.1 below illustrates the location of Semarang on the map. As the capital city of a province, Semarang has supporting facilities in transportation and accessibility. Thus, this city is easy accessible through sea with port, air with airport, and land with Trans-Jawa Highway and by train. Java as the most populated island in Indonesia also contributes to the density of Semarang as the capital city of province. Hence, Semarang growth significant over the decades, particularly in the economic and educational sector with those support of geography, accessibility, and population. Semarang is a city with numerous higher education institutes, including universities, academies, institutes, or schools. In contrast, Semarang as the capital city of Central Java Province has more vibrant higher educations compared to Yogyakarta, capital city of Special Region of Yogyakarta (Dani, 2019), despite of Yogyakarta called as city of students. Administratively, the city of Semarang is in the Central Java Province, in the

northern part of the province. Geographically, the city is located in the northern of province, coastal area with vital harbor, equipped with an international airport, two strategic train stations, and crossed by Trans-Jawa national highway. No wonder, Semarang is a strategic city for students across Indonesia to continue their study.
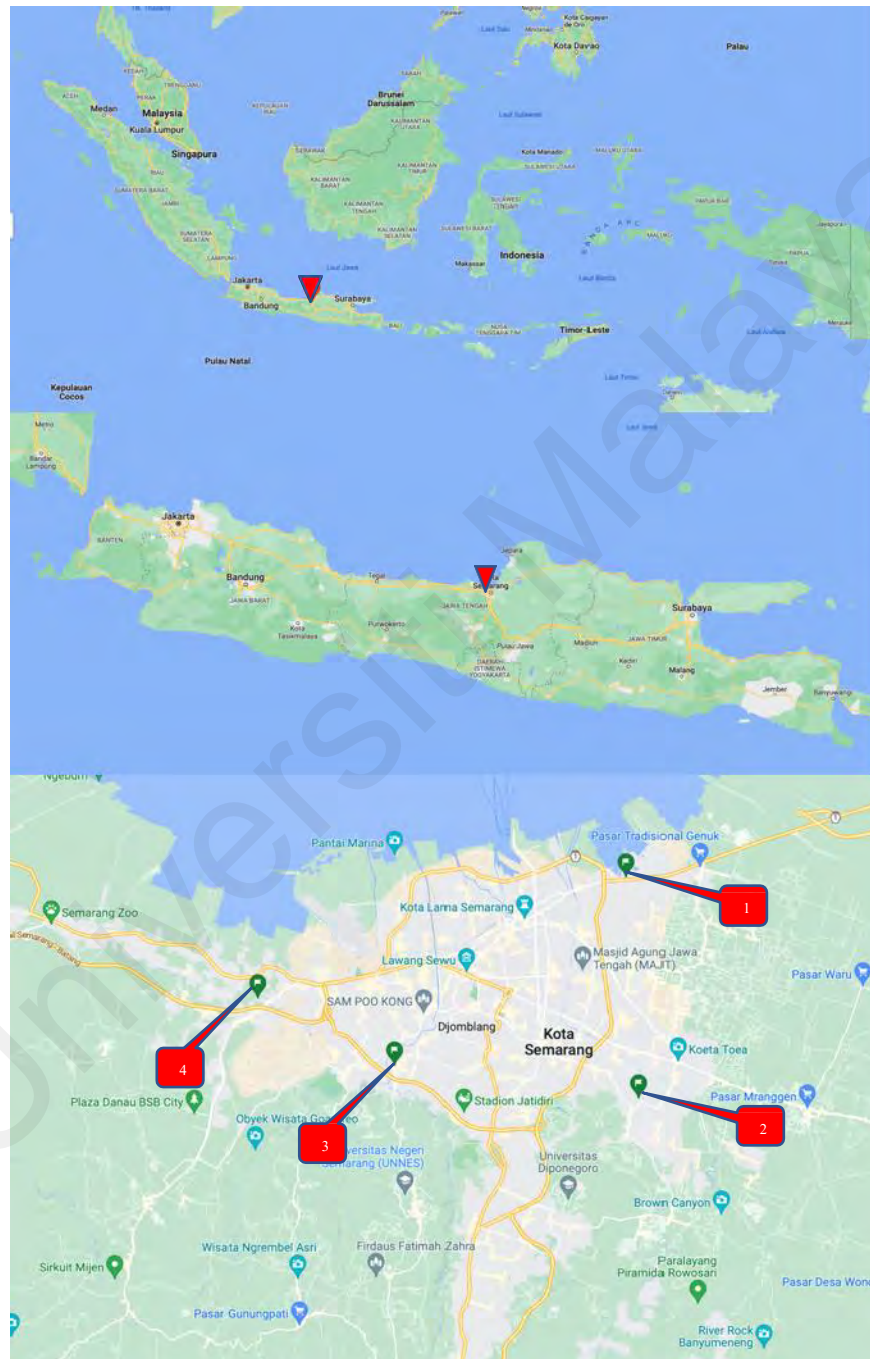
Figure 4.1 Above : the location of research in Semarang

The figure 4.1 above illustrates the research location in Semarang (red triangle) between Indonesia map; Middle : the location of Semarang (red triangle) between Java Island map; Bottom : (1) UNISSULA, (2) UNIMUS, (3) UNWAHAS, (4) UIN Walisongo between Semarang map[1]. According to the Central Bureau of Statistic Central Java, record of 2021 Semarang has 12 public universities, and 67 private universities. Of those data, there are three Islamic private universities and an Islamic public university which equipped with SH. Those Islamic universities are Universitas Islam Sultan Agung (UNISSULA), Universitas Muhammadiyah Semarang (UNIMUS), Universitas Wahid Hasyim (UNWAHAS); and the public university is Universitas Islam Negeri (UIN) Walisongo. Those Islamic universities spread across city of Semarang as can be seen on the Figure 4.1 above. The ISHs in Indonesia, particularly owned and managed by Islamic university can be categorized by its builder, built by MPWH or university. This builder category is considered important due to some reasons. The ISHs built by MPWH have the similar design to the regular SHs in regular universities, MPWH role as builder as well as donator for the buildings. The four Islamic universities in Semarang has that whole

---

[1] Source : Google Maps

https://www.google.com/maps/place/Kota+Semarang,+Jawa+Tengah,+Indonesia/@-7.0243682,110.2769778,11z/data=!3m1!4b1!4m5!3m4!1s0x2e708b4d3f0d024d:0x1e0432b9da5cb9f2!8m2!3d-7.0051453!4d110.4381254 (date accessed : February 26th 2023, 15.25)

varieties of ISH. Table 4.1 below briefly explain the ownership of ISH based on the builder and gender of student occupants.

Table 4.1 Islamic Student Housings in Semarang

Name of University	The builder of the SH			
	Male SH	Unit	Female SH	Unit
Universitas Islam Sultan Agung (UNISSULA)	MPWH	1	Institution	2
Universitas Muhammadiyah Semarang (UNIMUS)	Institution	1	MPWH	1
Universitas Wahid Hasyim (UNWAHAS)	MPWH	1	MPWH	2
Universitas Islam Negeri Walisongo (UIN Walisongo)	-		MPWH	1

As shown in table above, each category (gender and built building) has completely represented. Male ISH built by ministry represented by UNISSULA and institution built is represented by UNWAHAS. Whilst female ISH more diverse in each category, institution built represented by UNISSULA and UNWAHAS, at the same time UNIMUS and UIN Walisongo represent as ministry-built building.

4.3. Data of Universitas Islam Sultan Agung (UNISSULA)

Univeristas Islam Sultan Agung (UNISSULA) is one famous Islamic private university in Semarang with numerous faculties and diverse-by-culture students across archipelago. This university also well-known for its institution who owned hospital located next to the campus area and based as educational hospital outright. UNISSULA has a superb location, at the Northern Coastal national street, a stone-throw from exit Trans-Jawa national highway and surrounded by industrial area. This added values from facilities and infrastructures establish UNISSULA as a choice of students to extend their

study in higher institution. Figure 4.2 below illustrates the location of UNISSULA in the map of Semarang. [2]
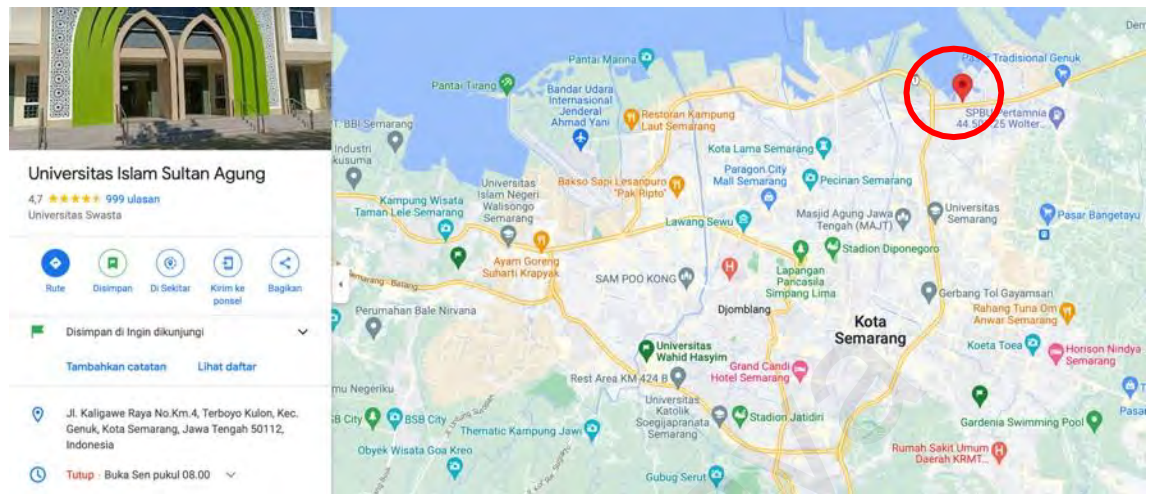
Figure 4.2 The location of UNISSULA (red circle) in the map of Semarang

4.3.1. Islamic Student Housings (ISH) of UNISSULA

UNISSULA has various buildings of SH that provide an Islamic teaching concept boarding house in order to meet the demands of its students in terms of both accommodation and intensive Islamic instruction. UNISSULA called its ISH as Pesantren Mahasiswa Sultan Agung (PESANMASA) translated as Sultan Agung Student Boarding House. The male student housing complexes are located in the northern area behind the Faculty of Engineering, and the female student housing complexes are located in the northwestern area behind the Faculty of Economic. There are two different locations for the PESANMASA complexes. The location of these PESANMASA complexes may be

---

[2] Source : Google maps
https://www.google.com/maps/place/Universitas+Islam+Sultan+Agung/@-6.9556177,110.4559853,856m/data=!3m1!1e3!4m5!3m4!1s0x2e70f322f377b3b5:0x16215f4ab8243a4d!8m2!3d-6.9556177!4d110.4580934 date accessed : February 25th 2023 11:59

seen in Figure 4.3 below. [3] The blue area represents the male student housings, while the pink area represents the female student housings.
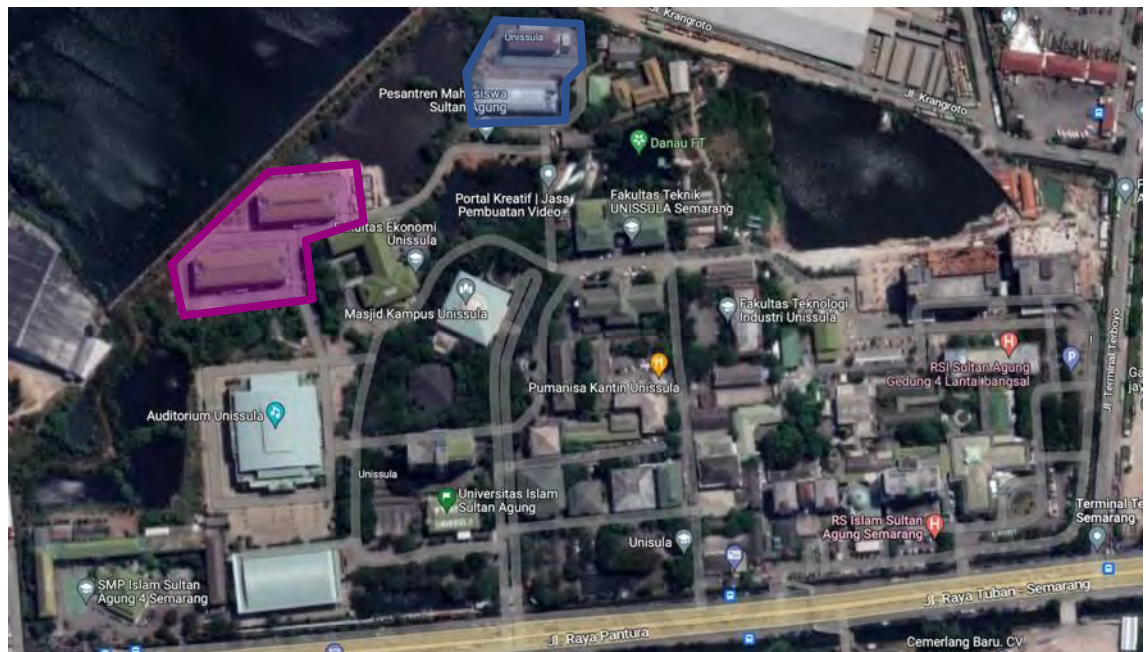
Figure 4.3 Location of UNISSULA ISHs

UNISSULA has total four ISH buildings that distributed two buildings for male students, and another two buildings for female students. The buildings for male students were built by MPWH, while female buildings were built by UNISSULA. Each male ISH building consist of 48 rooms and can be occupied for 4 students each room, and 192 students in total can occupy. While female ISHs are 4 story building with 78 and 62 rooms, each room occupied by 4 students, so 248-312 students in total can be accommodated in these buildings. Figure 4.5 below is the typical room of MPWH and institution built ISH building of UNISSULA.

---

[3] Source: Google Map
https://www.google.com/maps/place/Pesantren+Mahasiswa+Sultan+Agung/@-6.9528935,110.4580276,428m/data=!3m1!1e3!4m5!3m4!1s0x2e70f3163201a557:0x26c01c561bbc2f15!8m2!3d-6.9529536!4d110.4583756 date accessed : February 25th 2023 12.00

Figure 4.4 Typical Floor Plan of Male ISH

Figure 4.5 Interior of Male ISH UNISSULA
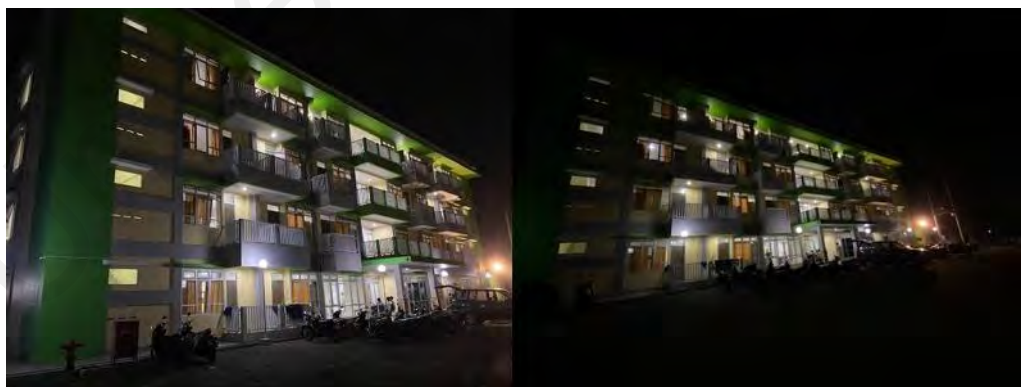
Figure 4.6 Exterior of Male ISH UNISSULA

Figure 4.7 Typical Floor plan of Female ISH UNISSULA

Figure 4.8 Interior of Female ISH UNISSULA

Figure 4.9 Exterior of Female ISH UNISSULA

4.3.2. Focus Group Discussion in UNISSULA

During the Focus Group Discussion (FGD) each gender was divided into several groups, due to difference activity and availability of students. The FGD held in several places of ISH UNISSULA and there were ten female and ten male students participating in the FGD. During the FGD activities, images were recorded using a cell phone camera to make it easier for researchers to analyse the participants' answers. The following Figure4.10 is the FGD process in UNISSULA.

Figure 4.10 FGD process in UNISSULA

Participants took part in the FGD and responded to questions describing their daily activities at ISH, focusing on privacy, sociability, and orientation. Participants engage in an interactive conversation with the researcher by asking and responding to printed questions. Then, at the conclusion of the FGD, participants were invited to fill out questionnaires for their own unspoken responses owing to shyness, pressure, or intimidation.

The FGD data resulted in UNISSULA and presented in the Atlas.ti application-generated diagram. With Atlas.ti, researchers can view the data of scripted FGD by studying words to generate codes and narrowing the codes to more specific codes. Atlas.ti also facilitates the linking and unlinking of each code with its relevant caption. Following are the provided codes and focused codes for each of the following themes: privacy, sociability, and orientation.

4.3.3. Data FGD of Male Participants ISH UNISSULA

The data from the focus group discussion (FGD) with the male student participants of ISH UNISSULA generated a unique tie between the privacy and sociability parts of the activity. In the meantime, orientation is composed of separate components that are not linked to either of the other two.

Privacy and Sociability

Figure 4.11The establishment of privacy and hospitality on UNISSULA male student housing

Table 4.2 List of abbreviation FGD Data in Privacy and Sociability of UNISSULA male participants

Abbreviation	Definition
Est Privacy M	Privacy establishment in male students
Prv Est Belongings	Privacy establishment in belongings
Prv Est Visual	Privacy establishment in visual
Prv Est Acoustical	Privacy establishment acoustical
Est Sociability M	Sociability establishment in male students

The mechanism of privacy among male participants of ISH UNISSULA is outlined in the preceding Table 4.2, which is strongly tied to the establishment of sociability in its simplest form. The association between privacy and sociability is an intriguing topic because of the intangible aspect of self-consideration, which bridges the gap between the two concepts of privacy and sociability. In spite of this, the presence of spatial as a tangible feature also bridges the gap between privacy and sociability in the male student accommodation provided by UNISSULA.

Orientation
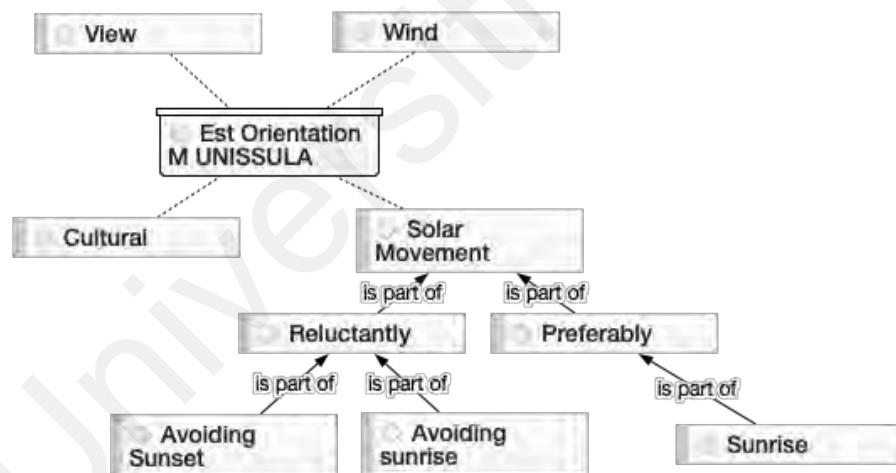
Figure 4.12 The desired orientation on UNISSULA male student housing

Table 4.3 List of abbreviation of the establishment of orientation on UNISSULA male student housing

Abbreviation	Definition
Est Orientation M	Orientation desired in male students

Figure 4.14 displays the results of the FGD analysis about the orientation values of participants. According to the latest data, the desired orientation of the building delivers a dynamic visual examination. When asked about building orientation, all participants believe that view, wind, and solar movement, in addition to cultural factors, determine their preferred building orientation. The orientation enquiry is unrelated to the prior topics of privacy and sociability. Nonetheless, the orientation is as important as the spatial value when considering ISH.

4.3.4. Data FGD of Feale Participants ISH UNISSULA

This section will provide an analysis of the data collected from the focus group discussion with female participants of the ISH UNISSULA. It is fascinating to observe the relationships between the three distinct values of privacy, sociability, and orientation among female participants. Following is a visualisation of the codes that were obtained from the FGD participants' responses.
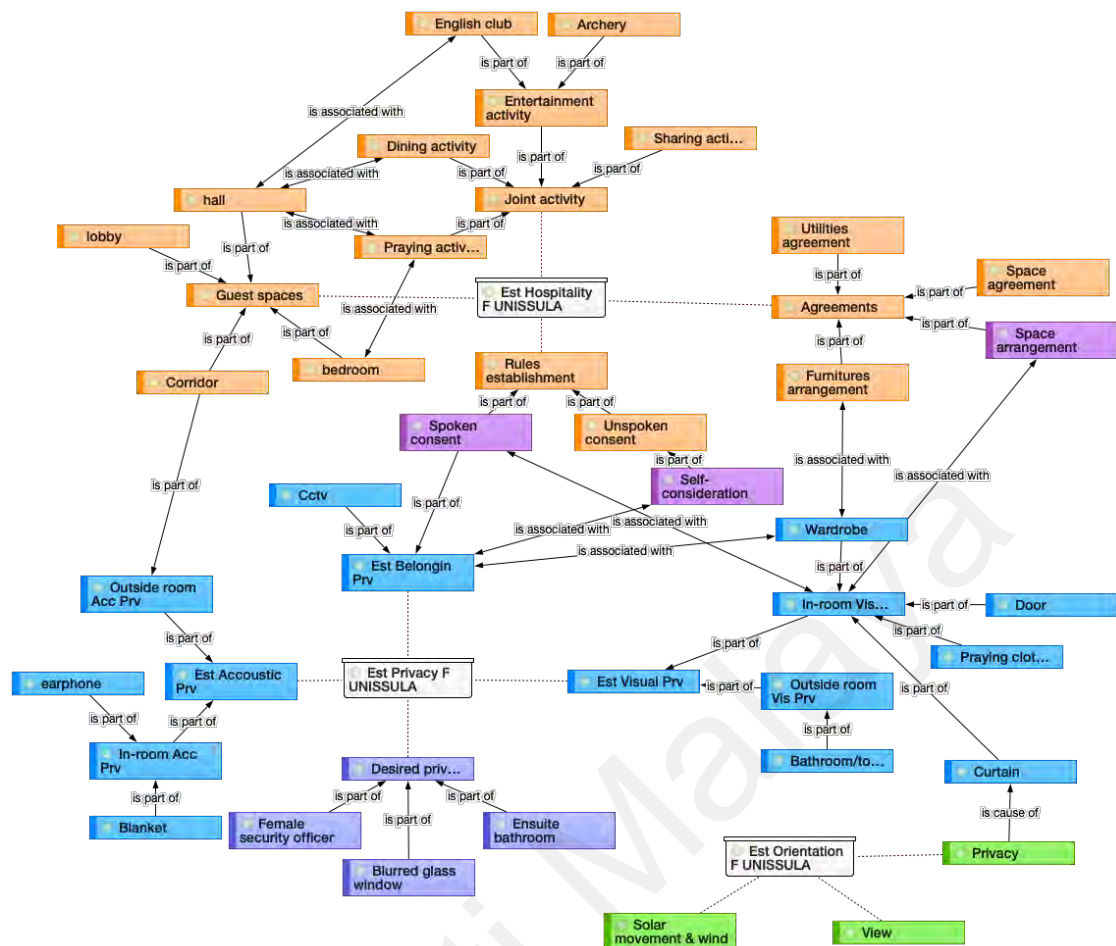
Figure 4.13 The establishment of privacy, sociability, orientation on UNISSULA female student housing

Table 4.4 List of abbreviation of the establishment of privacy, sociability, orientation on UNISSULA female student housing

Abbreviation	Definition
Est Privacy F	Privacy establishment in female students
Est Visual Prv	Establishment visual privacy
Est Belongings Prv	Establishment belongings privacy
Est Acoustic Prv	Establishment acoustical privacy
Est Sociability F	Sociability establishment in female students
Est Orientation F	Orientation establishment in female students

Privacy among female ISH UNISSULA residents appears to be less complex than in males. However, privacy-related findings have implications for other factors, like sociability and orientation. The establishment of visual privacy in UNISSULA's female

137

student accommodation consists of simple outside-room privacy and more elaborate in-room visual privacy. Comparable to male participants, FGD conducted in female student housing at UNISSULA reveals that the majority of sociability implementations are intangible. To establish the sociability component among female students at ISH UNISSULA, the presence of venues for collaborative activities and guests is crucial. In response to an enquiry about building orientation, the participants stated that their chosen building orientations are dictated by the view, wind, sun movement, and privacy.

4.4. Data of Universitas Muhammadiyah Semarang (UNIMUS)

Muhammadiyah, which is one of the largest Islamic organisations in Indonesia, is responsible for founding the Universitas Muhammadiyah Semarang (UNIMUS) university. There are many other Muhammadiyah educational institutions in Indonesia in addition to UNIMUS, making it clear that this university is not the only one of its kind in the country. Begin with formal education and work your way up to kindergarten before moving on to less formal or non-formal settings. The location of UNIMUS is in a very nice region, surrounded entirely by local households. Students who have recently graduated from high school are drawn to join Muhammadiyah because of its impressive track record as well as the campus's warm and welcoming environment. UNIMUS provides an ISH in order to house a select number of students, despite the fact that it is surrounded by residences that provide boarding services. The position of UNIMUS is depicted in figure 4.11[4], which can be found further down this page.

---

[4] Source : Google maps https://www.google.com/maps/place/UNIMUS+-+Universitas+Muhammadiyah+Semarang/@-7.0235989,110.4245244,14885m/data=!3m1!1e3!4m5!3m4!1s0x2e708c507be50d83:0x8b3ed2ccbc3d79c0!8m2!3d-7.0217608!4d110.4618645 date accessed : February 25th 2023 12.01pm
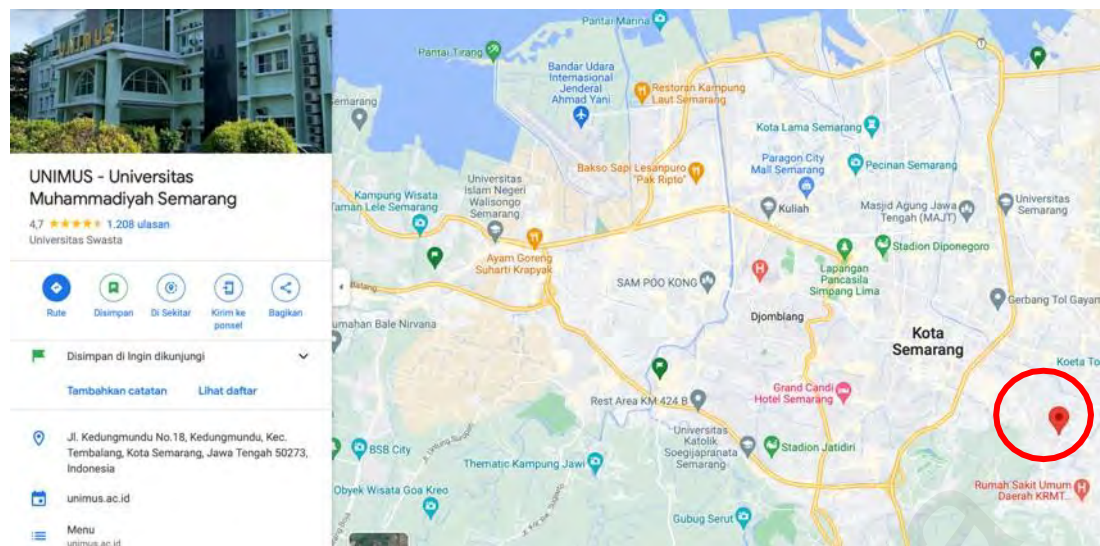
Figure 4.14 The location of UNIMUS (red circle) in the map of Semarang

4.4.1. Islamic Student Housing (ISH) of UNIMUS

For the convenience and striving the excellence of students, UNIMUS equipped its facility with Islamic student housings (ISH). There are two buildings for student housings, a three story building for female students located inside the campus area, and a two story male student housing located approximately five kilometers from main campus. Islamic Student Housing (ISH) of UNIMUS named as *Pondok Pesantren* (PONPES) KH Sahlan Rosjidi, a buildings for male students built by Muhammadiyah institution and a buildings for female built by The Ministry of Pubic Works and Housing (MPWH). Male PONPES called Pondok Tahfidz and emphasize in memorizing Quran, and female PONPES called PONPES Putri. Staying in PONPES is not an obligatory for UNIMUS students. Due to capacity shortage and higher demand, only selected and qualified applicants who eligible to stay in *Pondok Pesantren*. Encountering the limitation of accommodation in ISH, consequently only selected students who eligible to stay in ISH.

Figure 4.15 Location of female ISH UNIMUS in pink box.
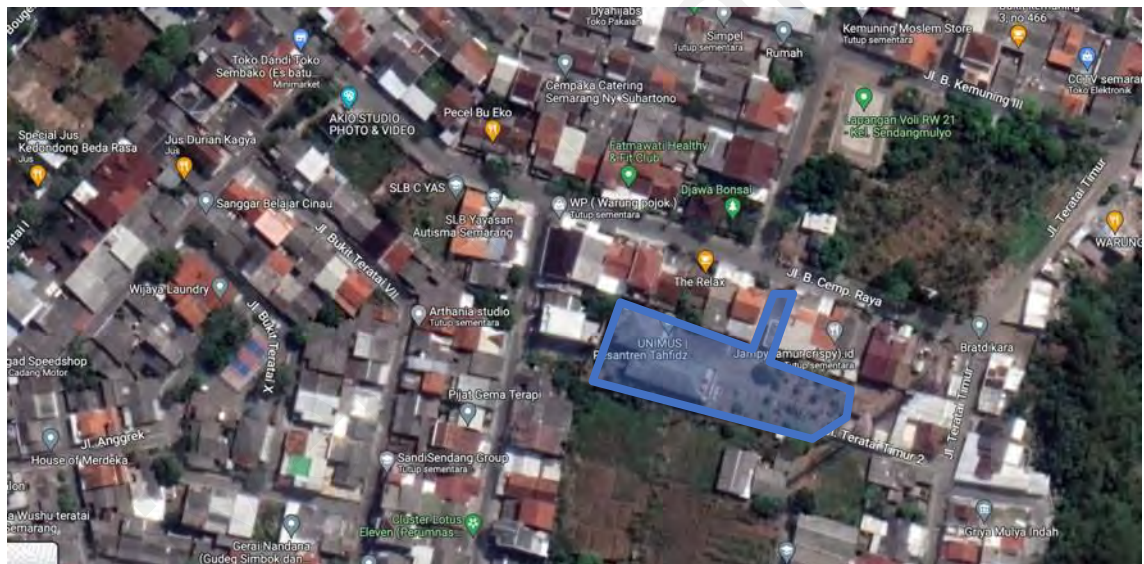
Figure 4.16 Location of male ISH UNIMUS in blue box

The male student housing building consists of 7 rooms for students and 2 rooms for managers, that can be occupied by 23 students in total. Meanwhile, female student housing building consists of 75 rooms for students and can be occupied by 222 students in total. The female student housing is in the main campus of UNIMUS, while male student housing located approximately five kilometres from main campus UNIMUS and is surrounding by dense neighbourhood. Figures 4.21 and 4.22 above shows the locations

140

of both ISHs[5], and Figure 4.23 and consecutive figures below show floorplans, and photos of ISH UNIMUS.
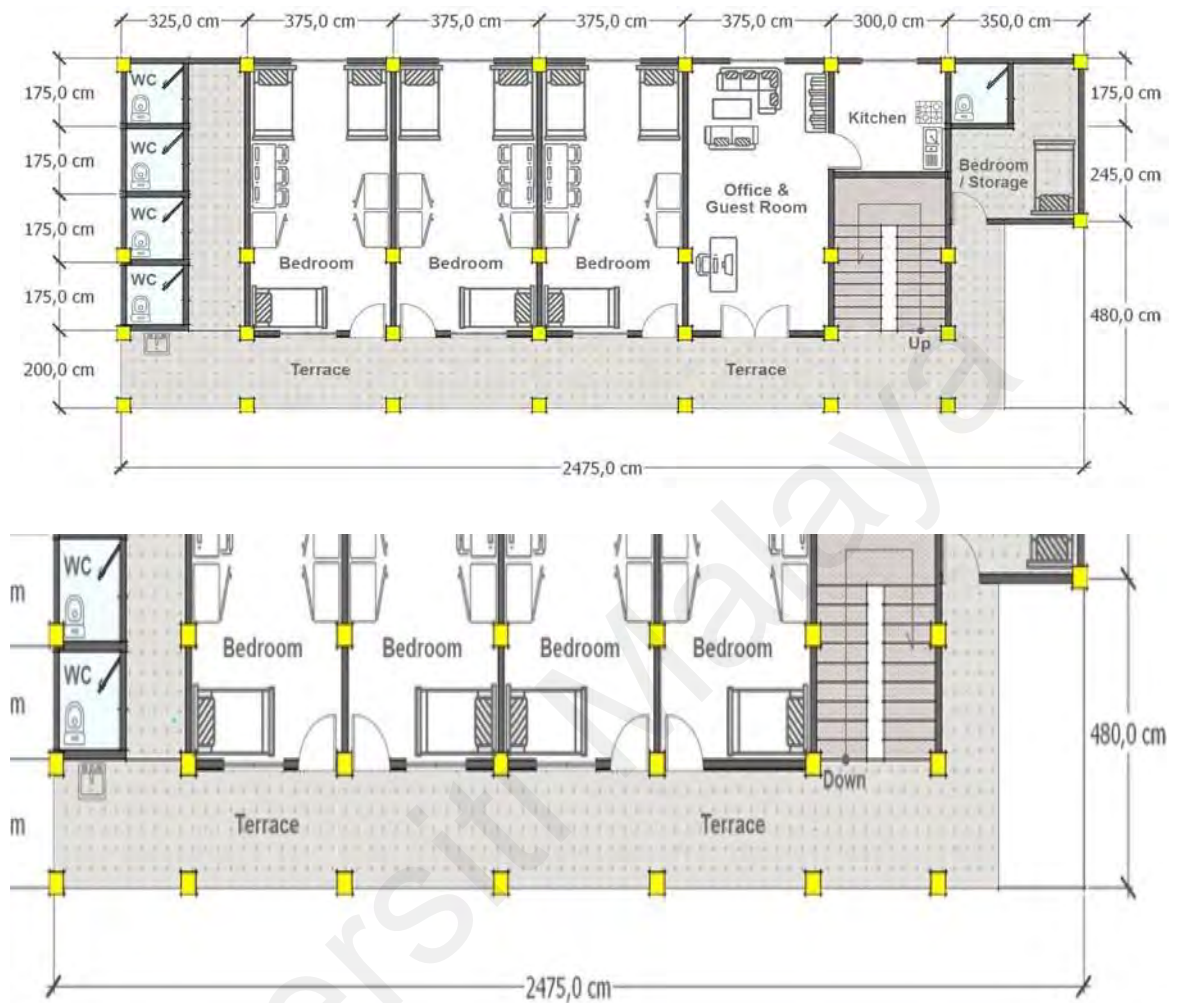
Figure 4.17 Floorplan of male ISH UNIMUS (up : ground floor, below : first floor)

[5] Source : Google Maps https://www.google.com/maps/place/Rumah+Susun+Sewa+Unimus.+Rusunawa/@-7.0214468,110.4611421,217m/data=!3m1!1e3!4m5!3m4!1s0x2e708c5a71d947c3:0xfac532770989f5b8!8m2!3d-7.0210343!4d110.4612321 Date accessed : February 25th 2023 12.17pm

Source : Google Maps https://www.google.com/maps/place/UNIMUS+%7C+Tahfidz+Islamic+Boarding+School/@-7.0470752,110.4752928,17z/data=!3m1!4b1!4m5!3m4!1s0x2e708db2944707e7:0x57a39fbf41a2b1dc!8m2!3d-7.0469705!4d110.4753268?hl=en-ID date accessed : February 25th 2023 12.18pm

Figure 4.18 Exterior condition of Pondok Tahfidz UNIMUS for male students

Figure 4.19 Room condition of Pondok Tahfidz UNIMUS for male students
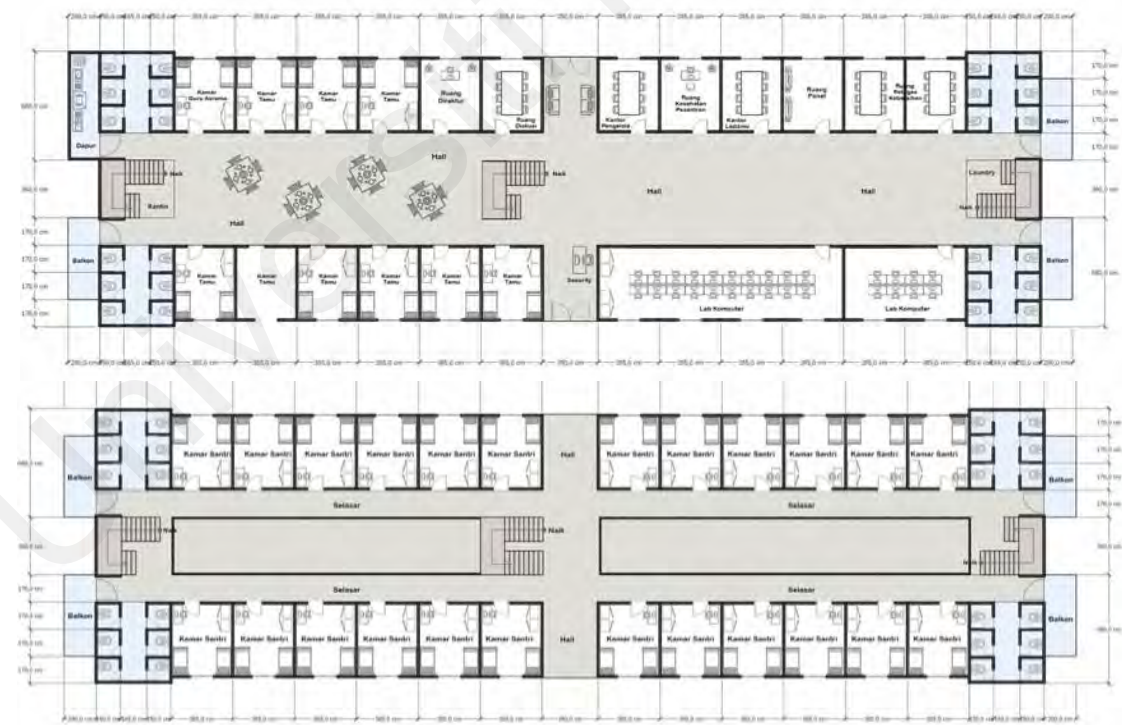
Figure 4.20 Typical floorplan of female ISH UNIMUS (up : ground floor, below : first floor
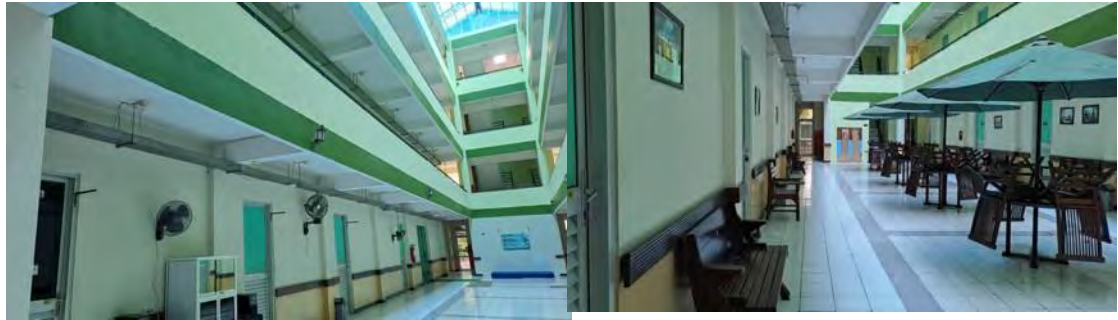
Figure 4.21 Interior condition of Pondok Pesantren (PONPES) KH Sahlan Rosjidi UNIMUS for female students

Figure 4.22Exterior condition of Pondok Pesantren (PONPES) KH Sahlan Rosjidi UNIMUS for female students

4.4.2. Focus Group Discussion (FGD) in UNIMUS

The data collection process at UNIMUS through FGD was carried out over the course of two days, with various times and locations for each student's gender. This was necessary due to the location of the male and female dormitories, which are quite a distance apart from one another. The focus group discussions with male students took place in the evening following the end of the Maghrib prayer period in the guest room of the male student housing complex known as Pondok Tahfidz. There were a total of twenty students, including both junior and senior students, who were accessible for conversation. During the focus group conversations with female students, which took place at night after the Isya prayer hour in the meeting room of the female student housing building known as Pondok Pesantren (PONPES) KH. Sahlan Rosjidi, There were thirteen seniors who were available to participate in the conversation. The FGD was conducted in an

interactive way, and researchers asked questions based on a list of questions that had been given Universiti Malaya's ethical clearance. During the FGD activities, photos were captured with the support of a cellphone camera in order to make it simpler for the researchers to evaluate the responses provided by the participants.

Figure 4.23 Focus Group Discussion (FGD) in ISH UNIMUS

4.4.3. Data FGD of Male Participants ISH UNIMUS

The data from the focus group discussion (FGD) with the male student participants of ISH UNIMUS generated a unique tie between the privacy and sociability parts of the activity. In the meantime, orientation is composed of separate components that are not linked to either of the other two.

Privacy and Sociability
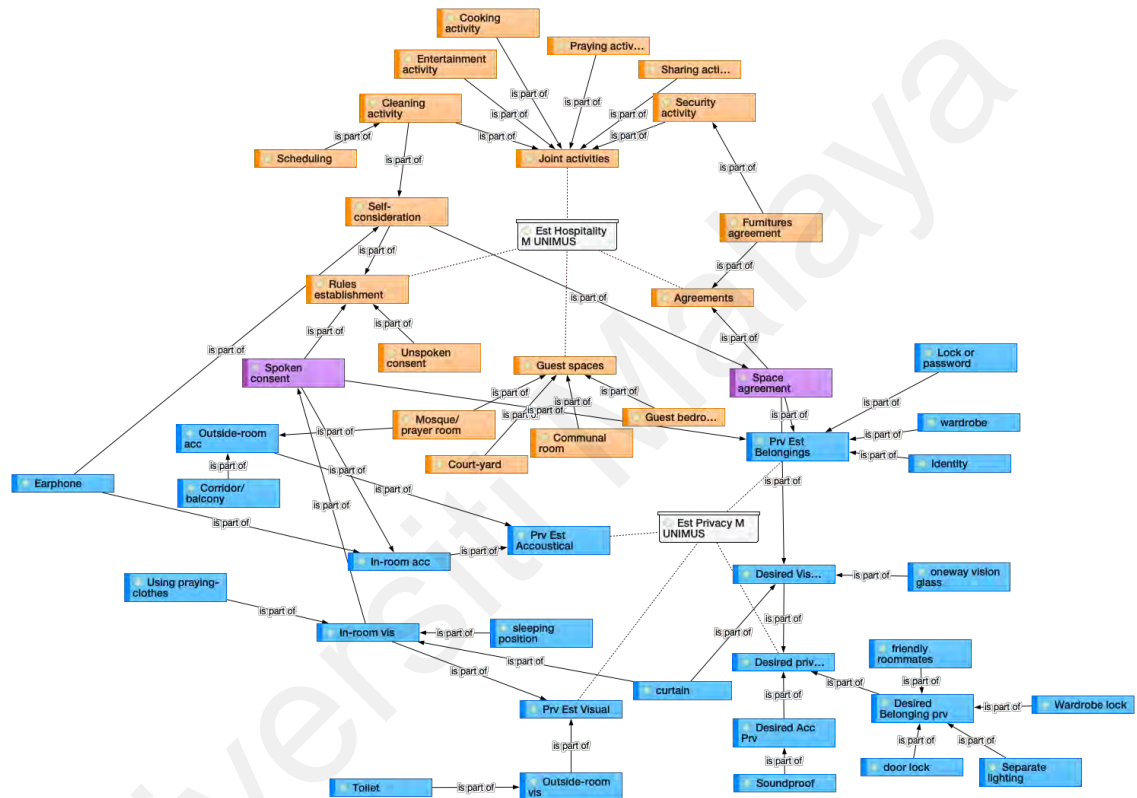
Figure 4.24 The establishment of privacy and sociability on male ISH UNIMUS

Table 4.5 List of abbreviation of the establishment of privacy and sociability on male ISH UNIMUS

Abbreviation	Definition
Est Privacy M	Privacy establishment in male students
Prv Est Belongings	Privacy establishment in belongings
Prv Est Visual	Privacy establishment in visual
Prv Est Acoustical	Privacy establishment acoustical
Est Hospitality M	Sociability establishment in male students

Figure 4.24 depicts the mechanism of privacy in male ISH UNIMUS students, which is directly linked to the establishment of sociability. The association between privacy and sociability is intriguing due to the fact that intangible elements, such as verbal assent and space agreements, bridge privacy and sociability. However, the provision of space as a concrete element also bridges the gap between privacy and sociability in UNIMUS's male student accommodation. The overall population of ISH UNIMUS is less than that of UNISSULA's male population. However, the mechanism of privacy was discovered to be more robust, having three prominent establishing aspects: visual, acoustical, and personal property.

Orientation
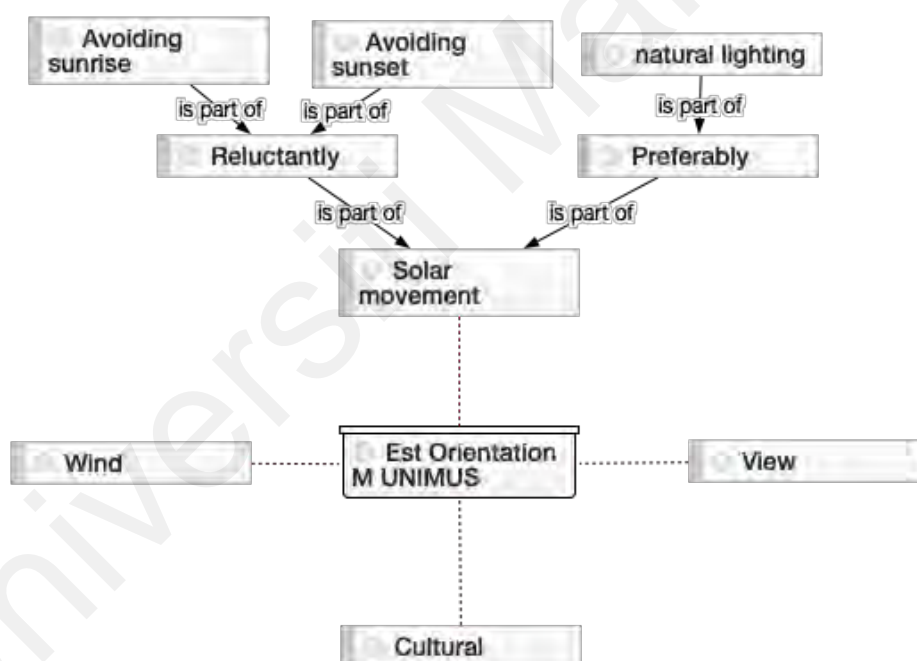
Figure 4.25 The desired orientation on male ISH UNIMUS

Table 4.6 List of abbreviation of the desired orientation on male ISH UNIMUS

Abbreviation	Definition
Est Orientation M	Orientation desired in male students

Figure 4.25 depicts the FGD analysis of orientation as values among male ISH UNIMUS. The desired building orientation in the current findings is comparable to that of UNISSULA student housing for males. In response to questions regarding building orientation, all respondents agreed that their preferred building orientation is dictated by view, wind, sun movement, and cultural factors.

4.4.4. Data FGD of female participants

This section expanding the FGD data with female participants of Female ISH Universitas Muhammadiyah Semarang (UNIMUS). Excitingly, the three aspects of locality in female participants have connected each other. Figure 4.26 below shows the visualization of codes from participants' answers in FGD.

Figure 4.26 The establishment of privacy, sociability, orientation on female ISH UNIMUS

Table 4.7 List of abbreviation of the establishment of privacy, sociability, orientation on female ISH UNIMUS

Abbreviation	Definition
Est Privacy F	Privacy establishment in female students
Prv Est Belongings	Privacy establishment in belongings
Prv Est Visual	Privacy establishment in visual
Prv Est Acoustical	Privacy establishment acoustical
Est Hospitality F	Sociability establishment in female students

147

The establishment of privacy among female residents of female ISH Universitas Muhammadiyah Semarang (UNIMUS) student housing is more extensive than in female UNISSULA housing. However, privacy-related findings have implications for other factors, like sociability and orientation. The establishment of visual privacy on female PONPES UNIMUS includes simple outside-room privacy and more complicated in-room visual privacy. Outside-room privacy has implications for their preferred orientation to prevent unauthorised outside sight. The hall of the female ISH UNIMUS building, on the other hand, is a key space for sociability practises. Some events, including extracurriculars, prayer, and guest reception, can be conducted in the hall. Obviously, the bedroom also provides sociability to enhance social connections with roommates and can also be used to receive close guests. In addition, students implemented rules and agreements as intangible parts of sociability. For the purpose of discipline training, spoken, unspoken, written, and unwritten rules are practised accordingly by students' circle or institution, and, surprisingly, these regulations bring students closer together. Moreover, the FGD data with female student participants of ISH UNIMUS regarding orientation as the dwelling values identified Qibla as an important component, and the other findings of the investigation were view, solar movement, and privacy.

4.5. Data of Universitas Wahid Hasyim (UNWAHAS)

Universitas Wahid Hasyim (UNWAHAS) is belonged to latest university in the city of Semarang which established in 2000. The university named after the founding father Abdul Wahid Hasyim, the national warrior, and former Minister of Religion Indonesia. UNWAHAS was established by Nahdlatul Ulama, another influenced Islamic organization in Indonesia. The existence of UNWAHAS provides more various good-quality Islamic university in with good curriculum and Islamic locality thought. UNWAHAS situated in a neighbourhood area in the downtown of Semarang, that makes the campus reachable. Similar to UNIMUS, students of UNWAHAS has assorted type of accommodation offered by neighbourhood surrounding, or in the ISH provided by institution. Figure 4.21 below illustrates the location of UNWAHAS in the map of Semarang.[6]

Figure 4.27 The location of UNWAHAS (red circle) in the map of Semarang

---

[6] Source : Google Maps https://www.google.com/maps/place/Universitas+Wahid+Hasyim/@-7.0125046,110.3779991,14.32z/data=!4m5!3m4!1s0x2e708b0fad5995fd:0x86d5cbb60b324e0!8m2!3d-7.0119465!4d110.3893361?hl=en-ID date accessed : February 25th 2023 12.53pm

4.5.1. Islamic Student Housing (ISH) UNWAHAS

The Islamic Student Housing (ISH) of UNWAHAS), also known as Pondok Pesantren Luhur Wahid Hasyim (PPLWH), is located in the heart of Semarang's heavily populated neighbourhood. As a result, the presence of PPLWH significantly reduces the effect of studentification because it can accommodate hundreds of UNWAHAS students. One of the three ISH buildings at UNWAHAS is reserved for female students, while the other two are reserved for male students and divided by other campus structures. The ISH's construction and operation are solely the responsibility of an Islamic institution. The building occupied by female students has a design similar to that of the MPWH-designed SH building, however the building occupied by male students has a different design. The ISH continuously faces a high demand for room occupancy from students, resulting in the total occupancy of all ISH buildings. Each of the 42 rooms at the housing facility for female students can accommodate somewhere between five and seven occupants. Consequently, the campus area that can house them and allow them to benefit from an Islamic-based Approach can only handle about 230 students. On the pictures that follow, the location of ISHs UNIMUS developed by MPWH is depicted, along with typical room layouts[7].

---

[7] Source: Google Maps https://www.google.com/maps/search/UNWAHAS/@-7.0124802,110.3892855,389m/data=!3m1!1e3 date accessed : February 25th 2023 14.24pm
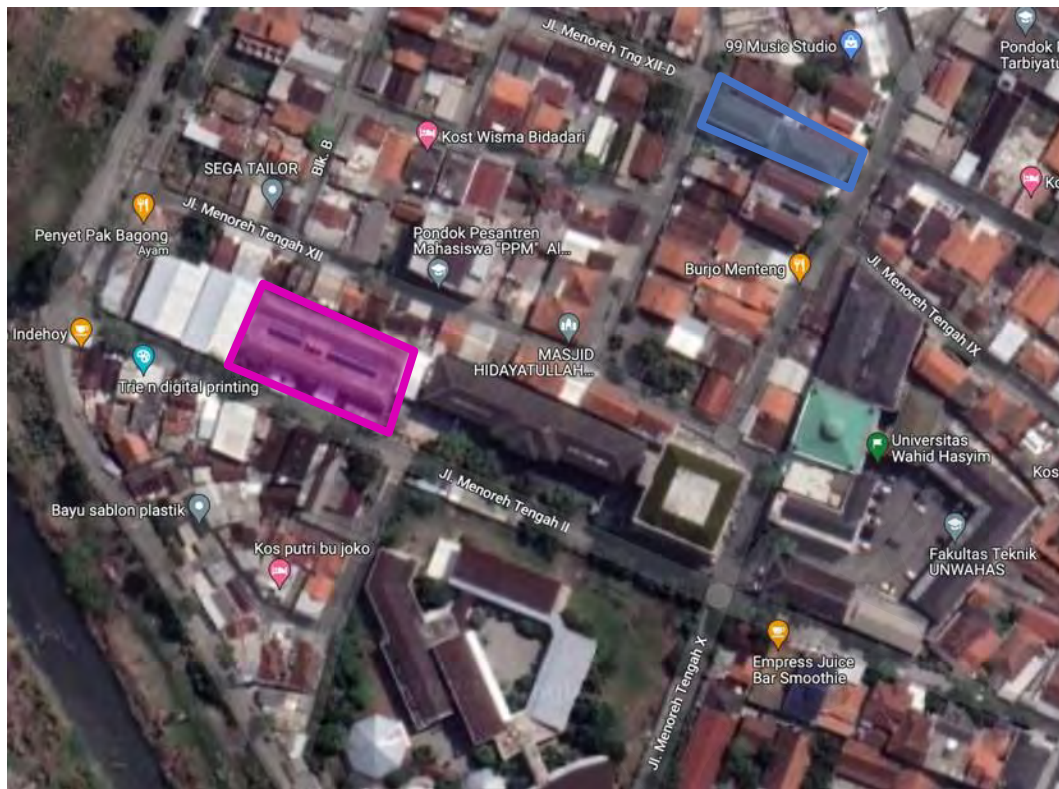
Figure 4.28 Location of ISHs UNWAHAS complexes, blue box for male student housing, pink box for female student housing

Figure 4.29 Floorplan of UNWAHAS male student housing

Figure 4.30 Interior condition of Pondok Pesantren Luhur Wahid Hasyim (PPLWH) for male students

Figure 4.31 Exterior condition of Pondok Pesantren Luhur Wahid Hasyim (PPLWH) for male students
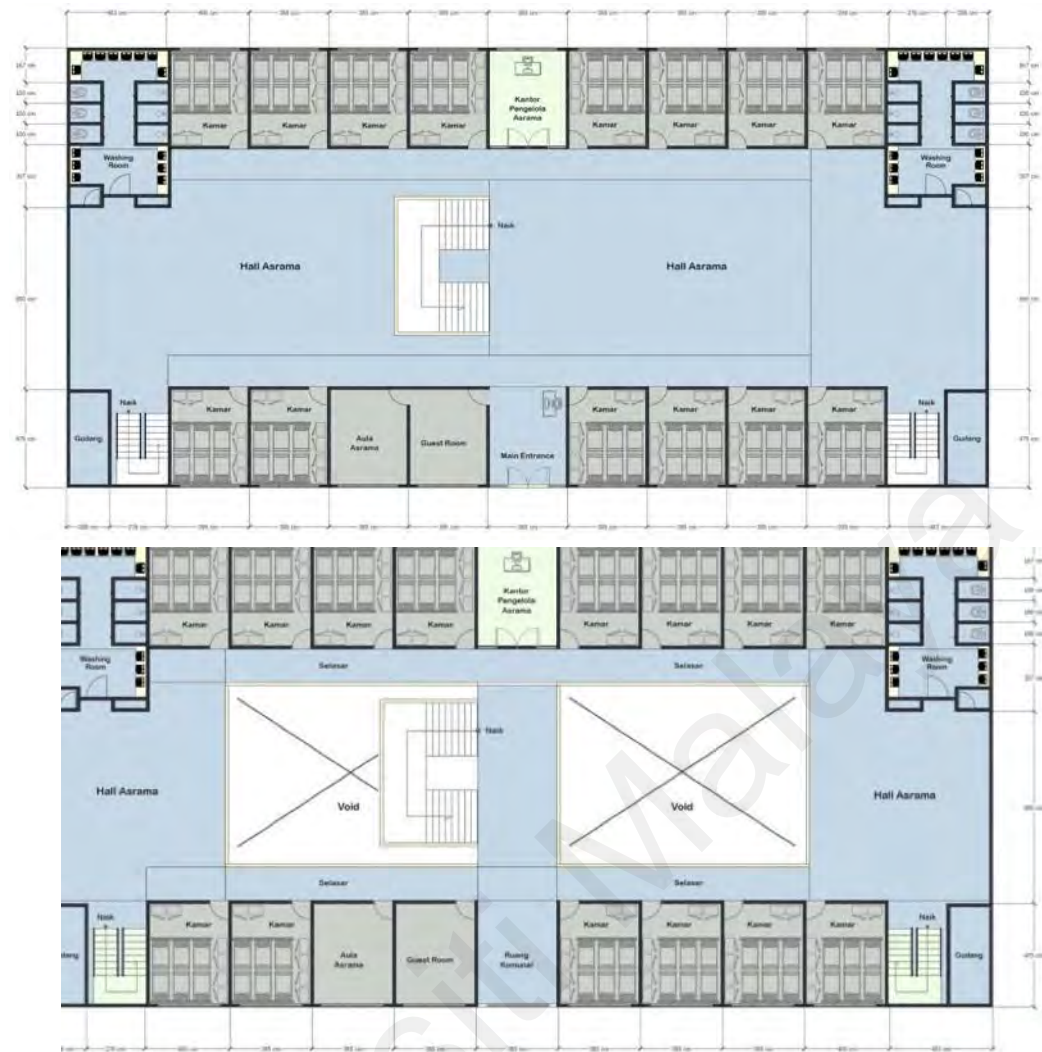
Figure 4.32 Typical floorplan of female ISH UNWAHAS (up : ground floor, below: first and upper floor
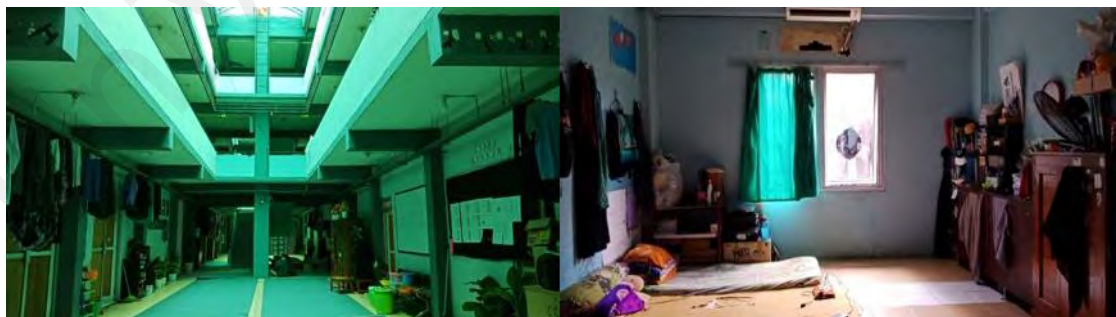
Figure 4.33 Interior condition of Pondok Pesantren Luhur Wahid Hasyim (PPLWH) for female students

153

Figure 4.34 Exterior condition of Pondok Pesantren Luhur Wahid Hasyim (PPLWH) for female students

4.5.2. Focus group discussion (FGD) in UNWAHAS

Due to the proximity of male and female student housings and the presence of senior students in the student housings, the data gathered from FGD in UNWAHAS were generated in a single day. The FGD meetings with male students took place in the male ISH building's hall. While FGD for female participants were located in the guest meeting room. Twenty male and fourteen female seniors were available for discussion. The FGD was conducted interactively, with researchers asking questions from a list of questions that had received Universiti Malaya's ethical approval. During FGD activities, photos were captured using a cellphone camera to facilitate the analysis of the participants' responses.

Figure 4.35 Focus Group Discussion for with students of ISH UNWAHAS

4.5.3. Data FGD of Male Participants ISH UNWAHAS

The FGD process conducted in male ISH UNWAHAS reveals that the privacy aspects has a linkage with sociability aspects. While orientation has no linkages with those two aspects. The data of the FGD regarding privacy and sociability obtainable in the Figure 4.36 below.

Privacy and Sociability
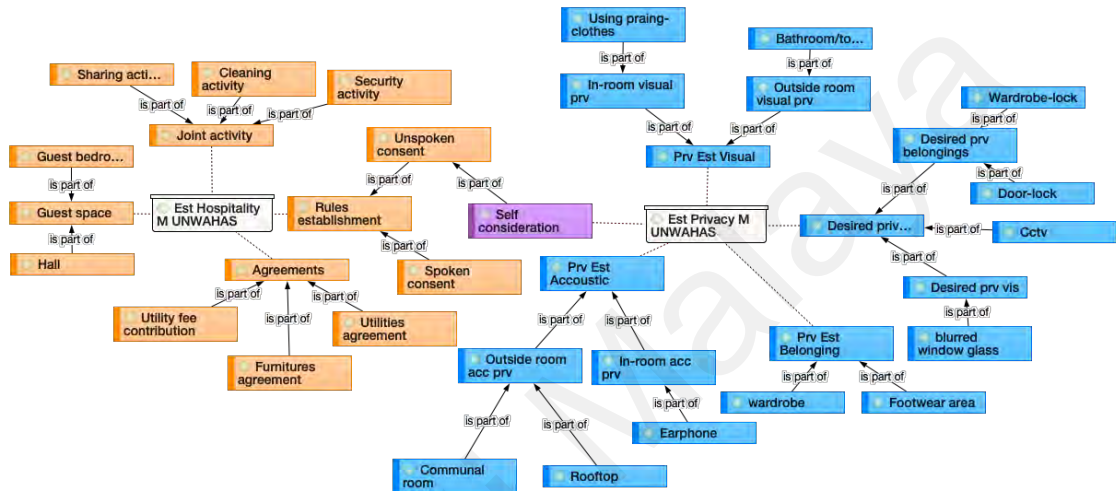
Figure 4.36 The establishment of privacy and sociability on UNWAHAS male student housing

Table 4.8 List of abbreviation of the establishment of privacy and sociability on UNWAHAS male student housing

Abbreviation	Definition
Est Privacy M	Privacy establishment in male students
Prv Est Belongings	Privacy establishment in belongings
Prv Est Visual	Privacy establishment in visual
Prv Est Acoustical	Privacy establishment acoustical
Est Hospitality M	Sociability establishment in male students

The operation of privacy establishment among male students of Pondok Pesantren Luhur Wahid Hasyim (PPLWH) / ISH UNWAHAS in relation to the establishment of sociability is depicted in Figure 4.36. The relationship between privacy and sociability is intriguing because an intangible characteristic, self-consideration, bridges the two aspects. Moreover, the mechanism of privacy was discovered to be more robust with three

key establishing aspects: visual, acoustical, and personal belongings. The analysis also reveals that students demand privacy for a more enjoyable stay in student accommodation.

Orientation
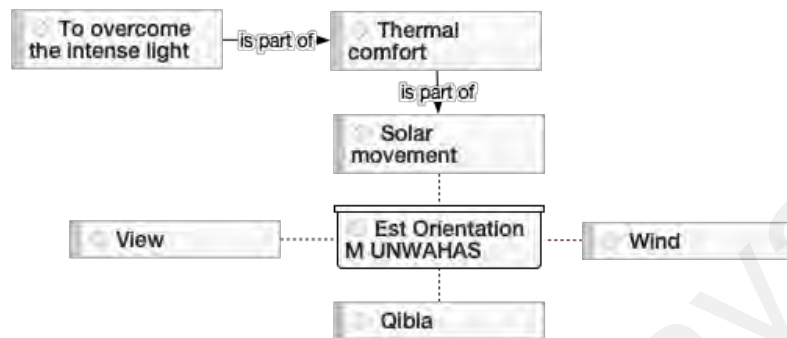
Figure 4.37 The desired orientation on male ISH UNWAHAS

Table 4.9 List of abbreviation of the desired orientation on UNWAHAS male student housing

Abbreviation	Definition
Est Orientation M	Orientation establishment in male students

Figure 4.37 above illustrates the FGD findings regarding orientation as dwelling values in *Pondok Pesantren Luhur Wahid Hasyim* (PPLWH) / ISH Universitas Wahid Hasyim (UNWAHAS). The desired building orientation in the current findings are quite similar to findings in previous male student housings. The inquiries reveal that their desired building orientations aspects are determined by view, wind, solar movement, and Qibla.

4.5.4. Data FGD of Female participants ISH UNWAHAS

This section will elucidate about the investigation from FGD data with female participants of *Pondok Pesantren Luhur Wahid Hasyim* (PPLWH) / ISH Universitas Wahid Hasyim (UNWAHAS). Excitingly, the three aspects of locality in female

156

participants have connected each other. Thus, the explanation of three aspects; privacy, sociability, and orientation will be explained separately due to the complexity and linking to each other aspects. Figure 4.38 below shows the visualization of codes from participants' answers in FGD.

Figure 4.38 The establishment of privacy, sociability, and orientation on female PPLWH

Table 4.10 List of abbreviation of the establishment of privacy, sociability, and orientation on female PPLWH

Abbreviation	Definition
Est Privacy F	Privacy establishment in female students
Prv Est Belongings	Privacy establishment in belongings
Prv Est Visual	Privacy establishment in visual
Prv Est Acoustical	Privacy establishment acoustical
Est Hospitality F	Sociability establishment in female students

The establishment of privacy among female occupants of female *Pondok Pesantren Luhur Wahid Hasyim* (PPLWH) Universitas Wahid Hasyim (UNWAHAS) shows vibrant and interrelate to each aspects. Nevertheless, privacy aspect findings have implication to other aspects, sociability, and orientation. The establishment of visual privacy on female PONPES UNIMUS consist of simple outside-room privacy, and more

157

complex in-room visual privacy. In acoustical privacy, female students of UNWAHAS resided in female PPLWH tend to implement it in simple way. Whereas the mechanism of belongings privacy by participants was discovered has an implication with visual privacy with the existence of spoken consent.

The hall and management office of female PPLWH UNWAHAS building is considerably a significant space for sociability practices. Those spaces work as tangible aspect in the establishment of privacy and sociability. The hall can accommodate some activities such as extra-curricular, praying, and receiving guests. Guest can also be received in the hall, or inside the management office for formal guests, and terrace for students' friends. PPLWH also provide a designated bedroom for overnight guest which this considerably a good practice for sociability in a student housing. Several joint activities for female participants are believed enhanced their social connectedness and generates sociability among occupants.

When inquired about building orientation, firstly the participants argued that their desired building orientations aspects are determined by view, wind, solar movement, and cultural. PPLWH female building is situated around dense neighbourhood. Hence, the finding regarding orientation is that participants indicate view as their desired view. Secondly their desired orientation is to the wind direction, reasoned that windy direction controls their bedroom comfort. Thirdly, solar movement is the third findings in building orientation aspects determined by students of UNWAHAS staying in PPLWH. Some of them desire the sunlight and the rest choose to avoid it due to glare. Thus, they adapt the window using curtain and sandblast sticker to reduce the glare. Finally, a significant finding of participant is the cultural thing, which their culture used to have building orientation towards south or north.

4.6. Data of Universitas Islam Negeri Walisongo (UIN Walisongo)

This university is the only public university among other Islamic universities designated for interview and observation research. Public universities often attract students to continue their studies at a higher level, particularly Islamic public universities with many faculties and disciplines. Consequently, Universitas Islam Negeri (UIN) Walisongo enrols a large number of students from all around Indonesia. UIN Walisongo is additionally equipped with ISH to meet students' needs in terms of accomodation. UIN Walisongo has three nearby campus sites, with the ISH located on the second campus. The ISH UIN Walisongo term Ma'had directly translates to "dorm" in English. Figure 4.39 demonstrates the position of UIN on the Semarang map[8].
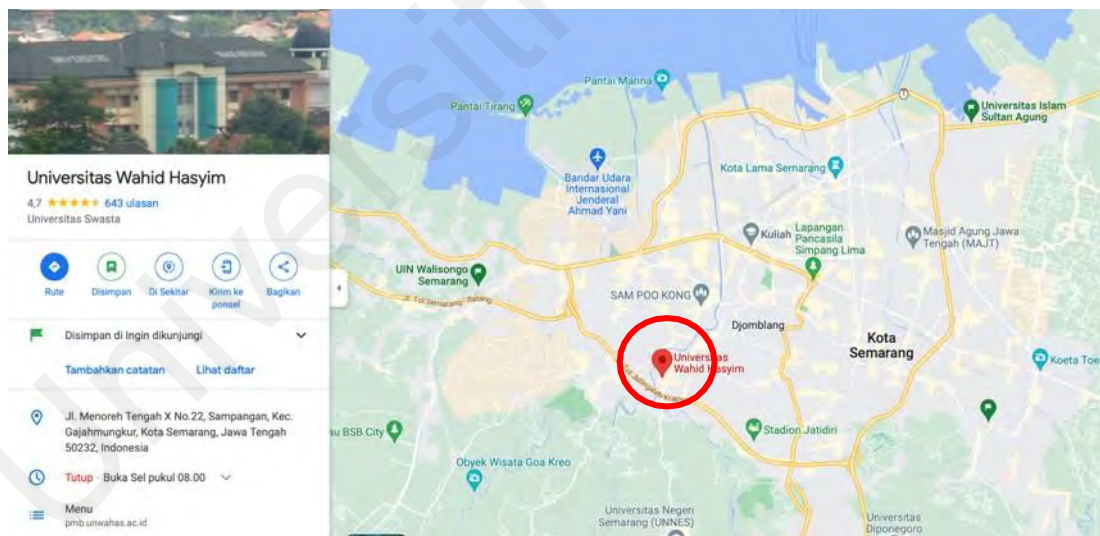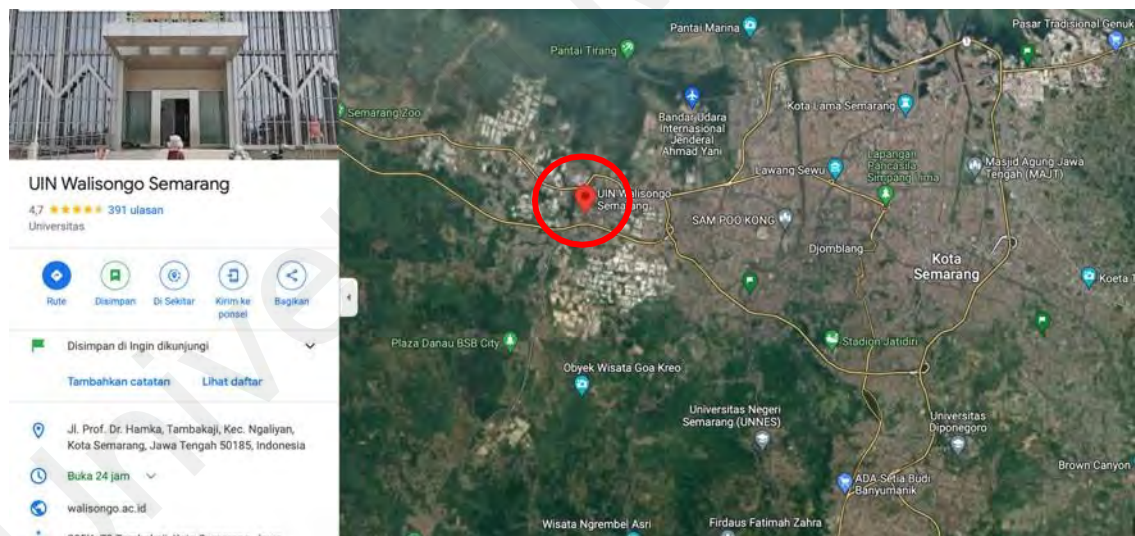

Figure 4.39 The location of UIN Walisongo (red circle) in the map of Semarang

---

[8] Source : Google maps https://www.google.com/maps/place/UIN+Walisongo+Semarang/@-6.991844,110.3396525,3424m/data=!3m2!1e3!4b1!4m5!3m4!1s0x2e708bbf356c97a5:0x526e5a5b2b1eb18e!8m2!3d-6.9918654!4d110.3484073 date accessed : February 25th 2023, 14.38

4.6.1. Islamic Student Housing (ISH) of UIN Walisongo

The university has only female student housing facility which lays on the hill overlooking the Java Sea. Islamic Student Housing (ISH) of Universitas Islam Negeri Walisongo (UIN Walisongo) named as *Ma'had Al-Jami'ah Walisongo*. The ISH of UIN Walisongo was awarded by MPWH and consists of 80 rooms which each room occupied by 5-6 students and totally whole building can supply the accommodation for 451 students. Design of the building including façade and layout similar to other MPWH buildings. The few number of room availability is immensely insufficient to accommodate whole students, otherwise only selected students eligible to contain in the ISH. Figures below shows the location and the typical room of ISH UIN Walisongo built by MPWH.[9]
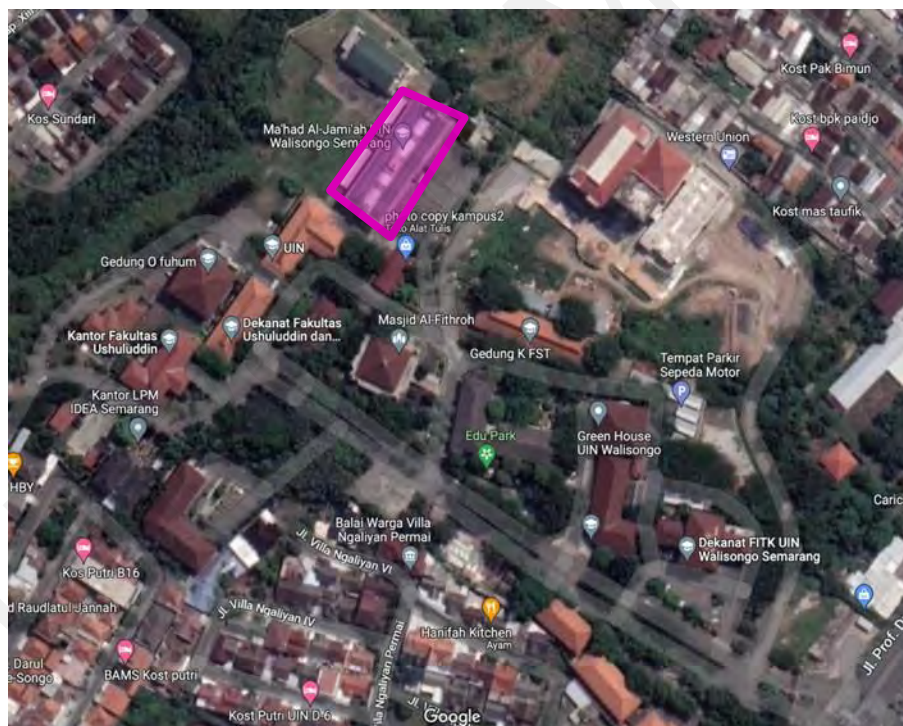
Figure 4.40 The location of Ma'had Al-Jami'ah Walisongo UIN Walisongo in pink box

---

Figure 4.41 Interior of ISH UIN Walisongo

Figure 4.42 Exterior of ISH UIN Walisongo

4.6.2. Focus Group Discussion in UIN Walisongo

The most recent collection of data at Ma'had UIN Walisongo took place at the office of the dormitory manager. The FGD occurred in the evening, before to the Maghrib prayer. Twenty-two senior students were eligible to participate in the discussion. The FGD was interactive, and researchers asked questions based on a list of questions that had received ethical clearance from Universiti Malaya. During FGD activities, photographs were taken using a mobile phone camera to make it easier for the researchers to analyse the participants' responses.

Figure 4.43 Focus Group Discussion for with students of Ma'had UIN
Walisongo

4.6.3. Data FGD of Feale Participants ISH UIN Walisongo

This section will elucidate about the investigation from FGD data with female participants of *Ma'had Al-Jami'ah Walisongo* / ISH Universitas Islam Negeri (UIN) Walisongo. Excitingly, the three aspects of locality in female participants have connected each other. Thus, the explanation of three aspects; privacy, sociability, and orientation will be explained separately due to the complexity and linking to each other aspects. Figure 4.44 below shows the visualization of codes from participants' answers in FGD.
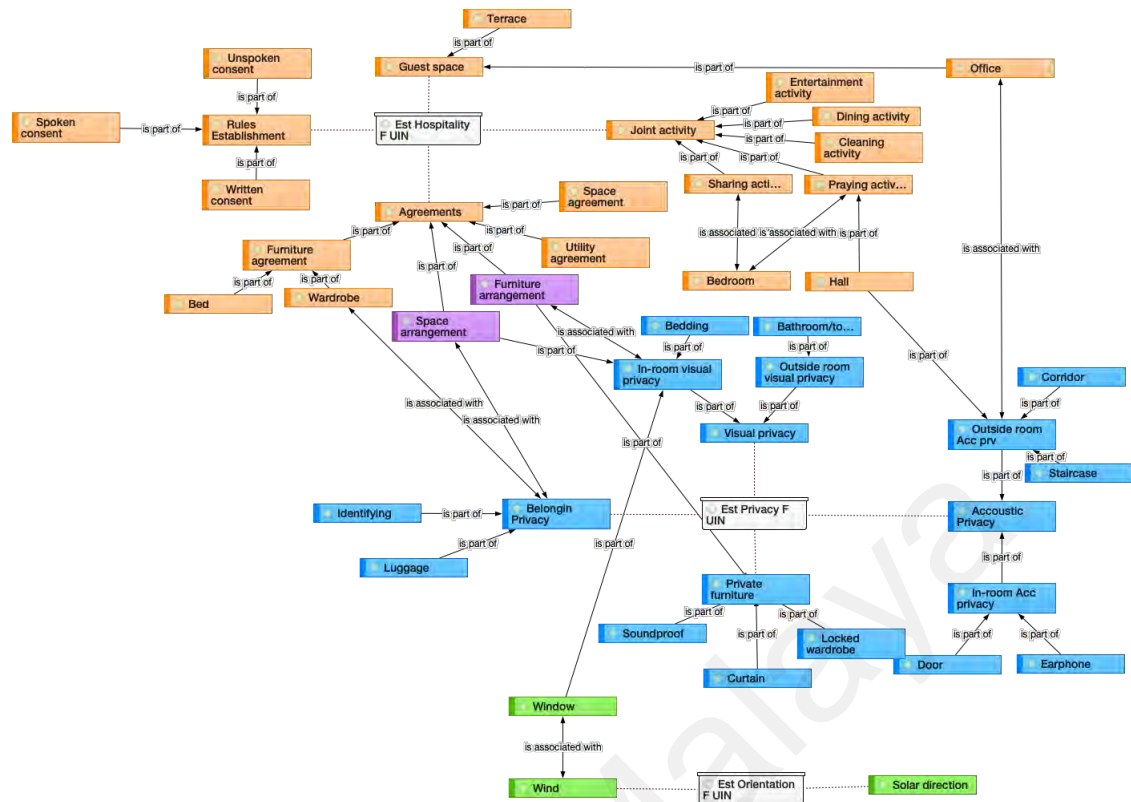
Figure 4.44 The establishment of privacy, sociability, orientation on UIN Walisongo female student housing

Table 4.11 List of abbreviation of the establishment of privacy, sociability, orientation on UIN Walisongo female student housing

Abbreviation	Definition
Est Privacy F	Privacy establishment in female students
Est Hospitality F	Sociability establishment in female students
Est Orientation F	Orientation establishment in female student

The establishment of privacy among Ma'had Al-Jamiah Walisongo's female residents is simple but extensive. Nonetheless, privacy findings have implications for other elements, including sociability and orientation. Visual privacy on Ma'had Al-Jami'ah Walisongo is established by simple outside-room privacy and more complex in-room visual privacy. In addition, in-room visual privacy revealed intriguing findings with implications for the sociability. Female students of UIN Walisongo who dwell in Ma'had Al-Jami'ah Walisongo tend to adopt acoustical privacy in a straightforward manner. They

163

required acoustic privacy primarily during phone calls and online meetings. During a phone conference or online meeting, they merely use earbuds to ensure acoustic seclusion in the room. In contrast, the technique by which participants maintained the privacy of their items was considerably simpler, yet it has consequences for aspects of sociability.

Analysis of FGD data from Ma'had Al-Jamiah Walisongo participants reveals that the bulk of sociability components include intangible implementations. However, the presence of guest areas is crucial for establishing the sociability aspect among Ma'had's female students. As the location where visitors are greeted, the office is also where students can employ acoustical privacy when receiving phone calls. Multiple events for female participants are claimed to have increased their social connections and fostered a spirit of sociability among residents. Some enjoyable activities, such as dining, creating video content, sharing stories, and laughing, appear to strengthen their bond. Intriguingly, among the female residents of Ma'had, praying as part of their religious obligation is discovered to be a source of sociability. In addition, students utilised norms and agreements as intangible parts of sociability. For the purpose of discipline training, spoken, unspoken, written, and unwritten rules are practised accordingly by students' circle or institution, and, surprisingly, these regulations bring students closer together.

Figure 4.44 illustrates the findings of the FGD analysis considering orientation as locality values. When asked about building orientation, the participants claimed that wind and solar movement dictate their intended construction orientation. The Ma'had structure is built atop a hill with sufficient wind velocity to cool the interior. As a result, the initial orientation finding is that participants state their ideal building orientation firmly. However, the angle of the window should be considered when attempting to cultivate the wind due to the strong association between wind cultivation and visual privacy. In

addition, the direction of the sun impacts their desired construction orientation, as certain solar directions offer their rooms with natural lighting.

4.7. Conclusion

In each of the four Islamic Student Housings (ISHs) situated on the campuses of various Islamic universities, the data collection procedure was carried out successfully. In the context of the founding type of Islamic Student Housings, the number of diverse sites included in this study was deemed sufficient and noteworthy. The ISH buildings built by the Ministry of Public Works and Housings as well as the ISH buildings constructed by the institution adequately establish the sampling of data for this study, with the gender of occupants in these types of buildings also establishing the sampling of data. In addition, both male and female student occupants contribute to the data collection, from which the upcoming chapter of analysisfindings derives vivid codes. The participation of students in Focus Group Discussions has resulted in the collection of credible information regarding the implementation of parts of the neighbourhood that are pertinent to students throughout their time living in Islamic Student Housings.

CHAPTER 5 FINDINGS :THE PRACTICES OF PRIVACY, SOCIABILITY, AND ORIENTATION AMONG STUDENTS

5.1. Introduction

This chapter covers the findings from focus group discussions (FGD) and secondary data collected during the data collection procedure. Using Atlas.ti, the previously conducted FGD activities were transcribed into a word document and afterwards analysed to generate applicable codes based on the research topics of students' living experiences in ISHs. In addition, FGD data analysed with Atlas.ti will be coupled with secondary data results regarding ISH circumstances. The next subchapter provides a summary of the analysis's findings, which will be used to develop a framework of ISH in Indonesia in the following chapter.

5.2. Research Findings

Using Atlas.ti, the FGD activities that were previously conducted were examined in order to generate relevant codes. Focused coding refers to the combination of codes that results from the codes. It is possible to join one targeted coding with another, despite the code. The participants' knowledge of a theme evolved from the connected and concentrated codes. The association between codes, focus codes, and topic themes privacy, sociability, and orientation, will be described in detail. Furthermore, the secondary data, including the floor plan and photographs, will strengthen the study in order to develop a thorough framework design for future Islamic Student Housing (ISH). This sub-chapter will compare and contrast the findings of FGD and secondary data collected from the research sites. The secondary data were used to bolster the findings and generate additional discoveries not discovered in the FGD. In the following

subchapter, the findings of the FGD will be summarised and then examined from the perspectives of the privacy, sociability, and orientation research themes. The assessment will be followed by an explanation supplemented with secondary data in the form of photographs as evidence of the participants' current condition, thereby completing their perspective of their stay experiences and desires for their ISH.

5.2.1. Findings of Universitas Islam Sultan Agung (UNISSULA)

Male participants of ISH UNISSULA had a different "Atlas.ti" outcome than female participants in terms of links to three aspects: privacy, sociability, and orientation, as indicated by FGD data described in the preceding chapter. In terms of linkage codes, the ISH UNISSULA results for male and female participants are distinct. The FGD data of male participants revealed a relationship between privacy and sociability and a codenamed Self-Consideration. While the orientation aspect is distinct and unrelated to the two preceding aspects. On the other hand, female participants of ISH UNISSULA reported a substantial association between the three aspects of privacy, sociability, and orientation. The dialogue between roommates through "Spoken Consent" connects privacy and sociability, whereas "Curtain" represents the private demands of female ISH UNISSULA students. This FGD data will be thoroughly analysed and cross-referenced with secondary data such as floor plans and photographs.

The FGD findings in UNISSULA shows that privacy has correlation with sociability in several ways, such as self-consideration and consent. Even the finding from female participants shows that privacy, sociability, and orientation correlated each other. The findings of both the FGD and the secondary data acquired from the research sites will be compared and contrasted in this sub-chapter. The cross analysis will most likely also disclose conditions that have not been discussed regarding the male ISH buildings

167

that were built by The Ministry of Public Works and Housings (MPWH) and the female ISH buildings that were built by UNISSULA.

5.2.1.1. Male Participants FGD Findings of ISH UNISSULA

Privacy

The mechanism of privacy was observed to be more active than expected, with three prominent establishing aspects: visual, acoustical, and belongings. This finding is quite intriguing. The following figure below is the analysis of FGD in privacy theme with male students of ISH UNISSULA.
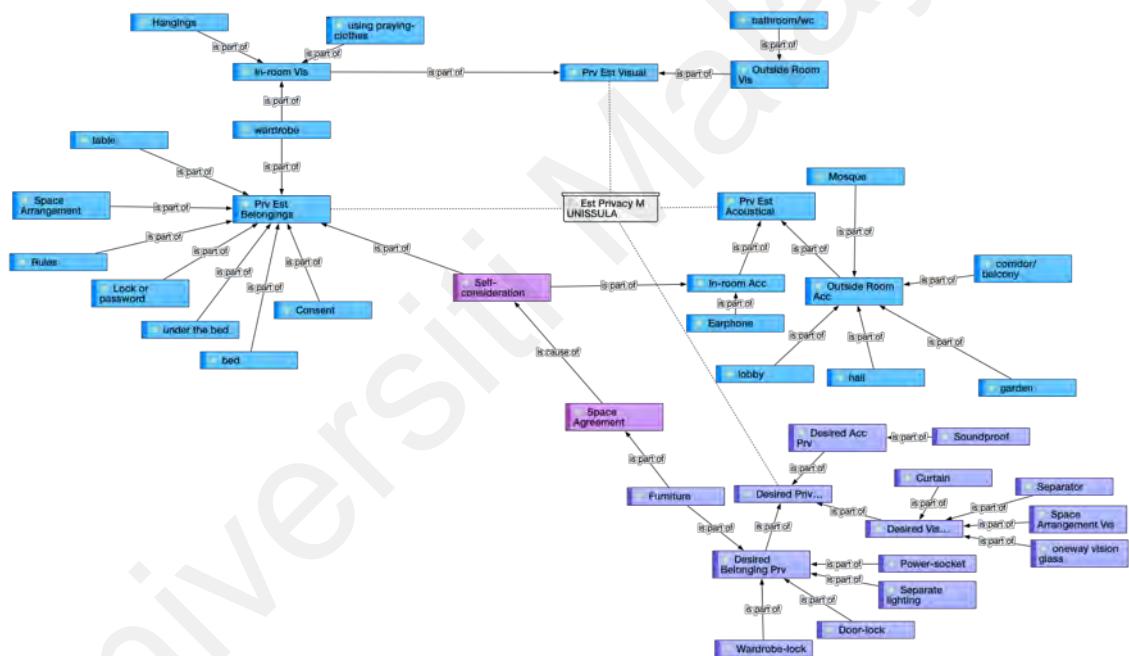
Figure 5.1 The establishment of privacy among male participants ISH UNISSULA

The findings of a FGD conducted with male students of ISH UNISSULA indicate that visual and acoustical privacy can be established either within or outside of the bedroom. Students will use the bathroom and toilet as their changing room in order to ensure that there are no prying eyes seeing them. Yet, they will also choose to change their clothing inside of their multi-user bedroom by making use of prayer clothes, hanging

towels, or arranging the openings of their wardrobe in a way that is appropriate to accomplish their desired level of visual privacy. In addition, utilising earphones in the bedroom can help achieve the desired level of acoustical privacy by allowing one to continue a phone call without fear of being overheard. The second choice for students who want to maintain their acoustical privacy is to leave their rooms and answer their phones in other areas of the student housing complex, such as the lobby, the hall, the garden, or the mosque. This choice allows students to maintain their acoustical privacy. Students who live in dorms with shared bedrooms learn to adapt with regard to the privacy of their belongings, which enables them to learn how to keep their things safe or even how to share them. The privacy of their belongings can be affected by pieces of furniture like wardrobes, tables, and bed frames, among others. Students learned how to manage their spatiality in order to maintain mutual convenience as a consequence of their experience of living in the student housing. As a result, they have developed skills in space organisation that allow them to protect their goods while preserving ample room for other people to use. The intangible factors that contribute to the formation of privacy are the most astonishing discovery made by the data analysis. Written guidelines, stated consent, or even the unspoken consent can all generate self-consideration in the context of respecting roommates' privacy.

Students do, however, want certain aspects of their stay in student housing to be more private for their own convenience and to improve the overall quality of their experience there. They want a separator or curtain to maintain their visible privacy while they are in the bedroom, and they want tinted or one-way vision glass to generate their visual seclusion from others who are outside the bedroom. Students want a wardrobe-lock so that they may keep their stuff safe within the multi-user bedroom, which is another form of privacy they desire. In addition, they desire a personal lamp and power socker

positioned around their bedframe. This is done so that they do not have to compete with other people for the use of power sockers. In the end, they wanted a soundproof chamber so that they could avoid eavesdropping, external noise, and uncomfortable vibration from the floor above them. The following part of the data gathering process focused on the sociability mechanisms utilised by male students enrolled in ISH UNISSULA.

Sociability

The next question that was posed to the participants was about how they create an atmosphere of sociability among housemates, roommates, and guests. The key characteristics of the sociability mechanism among male students in ISH UNISSULA are depicted in Figure 5.3, which can be found below.

Figure 5.2 The establishment of sociability on UNISSULA male student housing

The findings of the analysis of the association between sociability and privacy are displayed in the form of purple and blue codes. These codes refer to self-consideration, space agreements, the lobby, and the hall. It is fascinating that there is a correlation between privacy and the mechanism of sociability because it connects both tangible and intangible characteristics. Both the lobby and the hall are physical representations of the

170

connection between sociability and privacy. On the other hand, space agreement, which evolved from self-consideration amongst occupants, is referred to as the intangible aspects that bridge the gap between sociability and privacy.

The sociability mechanism that was used by the male students in PESANMASA indicated that the implementation of the intangible aspects took up the majority of their time. It is considered that the residents' participation in a number of group activities increased their social connectedness and generated sociability among the occupants. A sense of connection can presumably be established via the participation in amusing activities such as watching a movie, playing games, sharing stories, and laughing. PESANMASA, which is known as Islamic student housing, always has a full schedule of religious activities for its residents. So, it is interesting to find that one of the aspects that creates sociability among students is students reminding one other to attend in the faith activity. Also, students were responsible for the implementation of rules and agreements as intangible parts of the sociability aspect. Students' circles or institutions use spoken, unspoken, written, and unwritten rules suitably for the sake of discipline training, and those rules, surprisingly, connect students to be more intimate. Eventually, the existence of guest spaces as the tangible aspect of sociability constitute as the facility to receive guests. The guest spaces is a standard design to welcome guests and utilised by students for their private and communal activities. In addition, the following visual depiction of sociability practices among male ISH UNISSULA participants is presented in the picture below.

Orientation

The findings of the FGD analysis with regard to the values of orientation as locale are displayed up there in Figure 5.3 below.
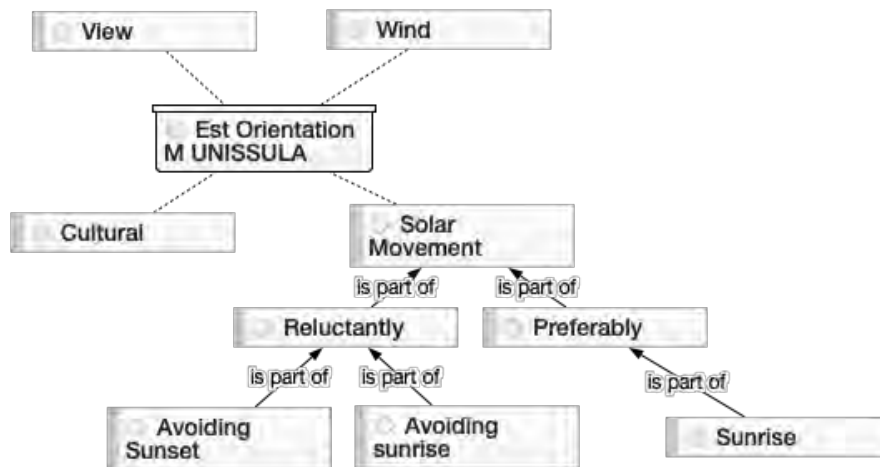
Figure 5.3 The desired orientation on UNISSULA male student housing

The desired orientation of the building in the new findings provides a lively visual examination. When asked about building orientation, all of the participants shared the opinion that the components of their desired building orientation which are determined by view, wind, and solar movement, as well as cultural things. The following is a concise explanation of the preferred orientation of the building for the students. ISH UNISSULA is situated in close proximity to the coast, and the male student accommodation building at the university has a side that looks out into the breath-taking seascape. As a result, the initial discovery pertaining to orientation is that participants consistently chose view as their most prominent desired view. In addition to the sea, participants selected view as their preferred building orientation; even so, they specified that the view should be of greeneries or a clean environment. Second, the students decided to face their buildings into the wind for their orientation choice. They reasoned that the direction of breeze blew in influenced the level of comfort in their bedroom. In addition, the coastal and near-industrial locations of ISH UNISSULA have temperatures that are higher than those in other parts of the city. The students of UNISSULA who were staying in ISH UNISSULA came to the conclusion that the solar movement was the third finding in the building

orientation aspects they identified. In addition, the responses of the subjects were separated into two categories: reluctance and a preference for sunlight. Those who valued their exposure to natural light opted for building orientations that faced the sunrise because it helped them feel more awake and refreshed in the morning. On the other hand, individuals who were resistant to solar movement cited concerns over the thermal comfort of their bedrooms. In conclusion, an intriguing discovery made about the participant is the cultural phenomenon, which is the fact that he was unwilling to *tusuk sate* or construct a building facing a T-junction.

5.2.1.2. Female Participants FGD Findings of ISH UNISSULA

Privacy

Privacy in female participants of ISH UNISSULA looks slightly simple rather than male version. Nevertheless, privacy aspect findings have implication to other aspects, sociability, and orientation.
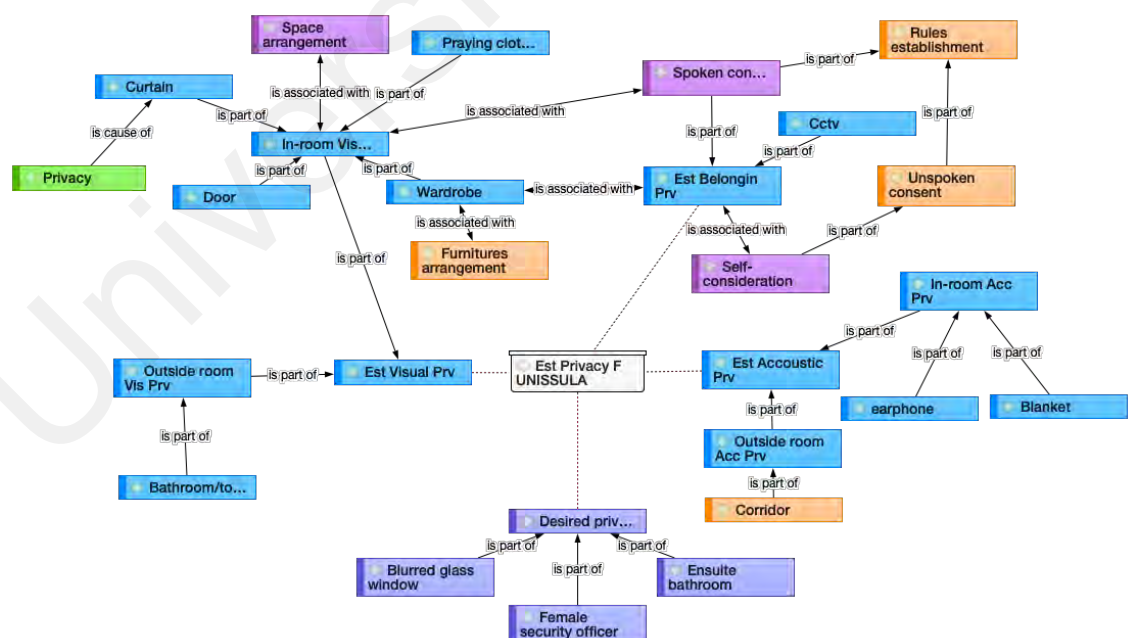
Figure 5.4 The establishment of privacy on UNISSULA female student housing

The establishment of visual privacy on female student housing of UNISSULA consist of simple outside-room privacy, and more complex in-room visual privacy. From the conducted FGD with students, they will maintain their visual privacy by changing clothes in the bathroom. Furthermore, in-room visual privacy found interesting findings with two implications to sociability and orientation aspect. In-room visual privacy argues that curtain and wardrobe play significant role in the establishment of visual privacy in multi-user bedroom. The curtain obstructs the view from outside to prevent peeper or unlawful sight. In accordance to orientation aspects, curtain is the material used for participants who reluctant to certain building orientation reasoned by the visual privacy. Next finding in with double aspect function is the wardrobe. With certain arrangement, such as utilize the wardrobe door, can increase the visual privacy level while changing clothes inside the room. Interestingly, students also make some space arrangements in their multi-user bedroom to generate small space in the corner for changing clothes. This space arrangements also have implication to other aspect, that is sociability. Hence, how they deal with roommates in the spatial arrangements to create that little space is part of sociability that will be explained in the next paragraph. The more surprising correlation is with the usage of praying clothes / praying robe to ease the changing clothes activity without leaving the bedroom but remain the visual privacy. However, the existence of door is still considered as the most basic building element for privacy and determine the privacy, security, and spatiality.

In acoustical privacy, female students of UNISSULA resided in ISH tend to implement it in simple way. The acoustical privacy they were need mostly during phone call or online meeting. To achieve the acoustical privacy inside the room, they just simply using earphone during phone call or online meeting. Uniquely, they utilize blanked or their bedding to cover their body during phone call to prevent the voice and sound heard

by their roommates. Likely to male participants, students will also having their call or achieve their acoustical privacy by leaving the room and receive it on the corridor or balcony.

Whereas the belongings privacy was also rather simple operation by female students by installed security cameras and implement the sociability. Security camera enhances the security and able to keep track of unwelcomed person. Unfortunately, security camera also reportedly threaten female participants' visual privacy. Well established sociability among multi-bedroom users emerges a secure feel for students to store their belongings inside the bedroom. Spoken consent to their roommates and implemented self-consideration from unspoken consent that manifested by social connectedness create an intangible security element. Hence, there was a significant positive correlation between sociability and belongings privacy among female students in UNISSULA student housing.

FGD analysis finds participants' desired privacy in their student housing. encompass building material, room type, and actor involved. The blurred glass participant's desired building material for window glass to achieve visual privacy without compromising natural lighting. Then, private attached bathroom in the bedroom is favourable room type according to participant because attached bathroom to the bedroom is uncompromising visual privacy. Lastly female participants aspire female security officer to shift the current male officer. They argue that monitored security cameras by male officer is visual privacy threat.

Sociability

Comparable to male participants, FGD conducted in female student housing of UNISSULA finds intangible implementation of sociability have the majority in the implementation. However, the existence of spaces for joint activities and guests

175

considerably significant to establish the sociability aspect among female students in ISH UNISSULA. The key characteristics of the sociability mechanism among female students in ISH UNISSULA are depicted in figure which can be found below.

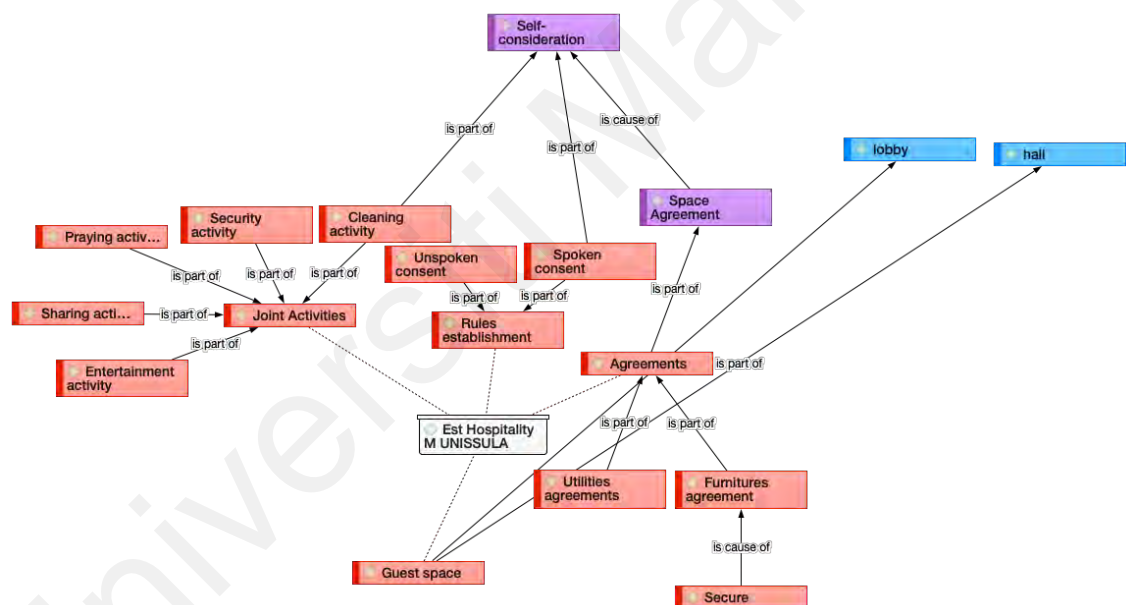Figure 5.5 The establishment of sociability on UNISSULA female student housing

Several joint activities for female participants are believed enhanced their social connectedness and generates sociability among occupants. Some fun activities such as dining, and extracurricular programs, share the stories and laughter are seemingly establish their togetherness. Praying as their obligatory in performing faith is interestingly found as intangible things to create sociability among female occupants of ISH UNISSULA. Furthermore, rules and agreements as intangible aspects in sociability were applied by students. Spoken, unspoken, written, and unwritten rules practiced accordingly by students' circle or institution for the sake of discipline training and surprisingly those connect students to be more intimate. Eventually, the existence of guest spaces as the tangible aspect of sociability composes as the facility to receive guests. The guest spaces

is a standard design to welcome guests and utilized by students for their private and communal activities.

Orientation

When asked about building orientation, the participants argued that their desired building orientations aspects are determined by view, wind, solar movement, and privacy. The results of the FGD analysis regarding orientation as locality values are obtainable in the Figure 5.11 below.
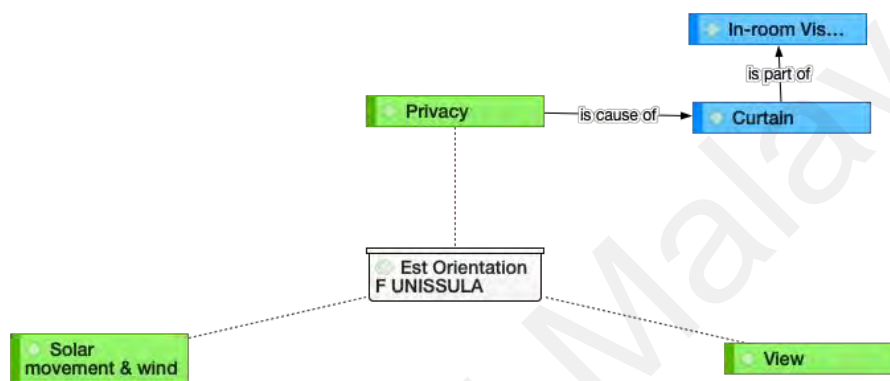
Figure 5.6 The orientation desired on UNISSULA female student housing

ISH UNISSULA female building is situated close to seashore and a side of the student housing is facing the scenery of sea. Hence, first finding regarding orientation is that participants indicate view as their desired view firmly. Secondly, wind was the choice of female participants for their building orientation. They reasoned that windy direction controls their bedroom comfort. In addition, coastal and near industrial location of PESANMASA has higher temperature than other area of city. Thirdly, solar movement is the third findings in building orientation aspects determined by students of UNISSULA staying in PESANMASA. Finally, a significant finding of participant is the privacy to avoid the window direction towards public area. In addition, the following visual depiction of desired orientation among female ISH UNISSULA participants is presented in the picture below.

5.2.1.3. Male Participants Cross Analysis Findings of ISH UNISSULA

A FGD done with male PESANMASA students revealed that visual and audio privacy can be established either inside or outside the bedroom. While privacy of personal belongings is developed between roommates and established exclusively within the room itself. However, male students desired some privacy-related components for their own convenience.

A. Privacy

The privacy practices among male participants of ISH UNISSULA established in visual, acoustical, and belongings. Its practices visualized in the following figure and table about recap of findings regarding privacy establishment among male participants of ISH UNISSULA.

Figure 5.7 Visualization of privacy practices among male participants ISH UNISSULA

Table 5.1 Recap of privacy establishment of male participants of ISH UNISSULA

Privacy in Male ISH UNISSULA		
Visual	Acoustical	Belongings
In-room : - Hanging towels/ cloth - Praying clothes	In-room : -Earphone -Self consideration	In-room : - Wardrobe - Table - Space agreement - Rules - Lock - Under bedframe - Bed - Consent - Self-consideration
Outside : - Bathroom	Outside : - Lobby - Corridor/ balcony - Hall - Garden - Mosque	
Desired : - Curtain - Separator - Layered window-glass	Desired : - Soundproof	Desired : - Wardrobe-lock - Door-lock - Separate lighting - Separate power socket

Visual Privacy in Male ISH UNISSULA

The visual privacy practiced by male participants of ISH UNISSULA conducted inside and outside room. Visual privacy normally practiced to make a secure feeling when participants changing clothes. In order to establish the visual privacy when participants changing clothes, some treatments were conducted.

- Provided ISH Properties : Outside bathroom

Male ISH UNISSULA buildings have multiple bathrooms to accommodate their dwellers. Each floor has two bathroom areas, each with toilets and showers. Each floor has sixteen restrooms, which is sufficient to meet the students' needs for taking showers, using the toilet, and changing clothing. However, students tend to change their clothes in their rooms because it is more convenient. In order to guarantee visual privacy within the room, participants claimed that prayer clothes is required, as explained in the following section.

Figure 5.8 Toilet condition of Male ISH UNISSULA

- Self-properties : praying clothes

To simplify and expedite the process of changing clothing, the participants decided to do so solely within the room. To maintain their privacy, however, participants used prayer clothes, such as sarongs, when changing clothes to visually conceal their body parts.

- Arrangements : hanging towels/ fabrics

Apart from using cloth to cover the body when changing clothes, they also use cloth to cover private space, such as the sleeping area. Participants will hang the cloth in several areas of their bed so that their sleeping activities are not visible to roommates while sleeping. The figure below shows the hanging towels/ fabrics to block their body visually while sleeping.

Figure 5.9 Room condition of Male ISH UNISSULA

Even though the participants generally feel at ease and at home when living at ISH UNSSULA, they have visual privacy preferences that they would like to have that are not now available at ISH UNISSULA. For instance, the participants desired a curtain for their bunk bed to conceal their sleeping activities. In addition, the participants wished for a separator that could be used to change clothes, so that they could do it without wearing prayer clothes. Furthermore, participants also expecting a layered window glass, such as sand-blast layered sticker on the glass to conceal visually from outside the ISH UNISSULA building. The following figure depicts the current state of male bedrooms in the ISH UNISSULA based on the privacy behaviours and preferences of the participants.

Figure 5.10 Current condition of Male ISH UNISSULA for privacy practices

Acoustical Privacy in Male ISH UNISSULA

The acoustical privacy practiced by male participants of ISH UNISSULA conducted inside and outside room. Visual privacy normally practiced to make a secure feeling when participants making phone call or having online meeting. In order to establish the acoustical privacy when participants in a private call or online meeting, some treatments were conducted.

- Leaving the bedroom

To ensure their acoustical privacy, participants must leave their rooms and answer their phones in other areas of the student housing complex, such as the lobby, the hall, the garden, or the mosque. This option permits students to preserve their acoustic privacy. The male ISH UNISSULA has multiple locations besides bedrooms to accommodate students with acoustic privacy requirements. Even the bedroom unit has a balcony where students can accept calls in complete acoustic solitude. However, the balcony and lobby lack such sitting groupings for students to utilise while taking calls or participating in online conferences.

Figure 5.11 Balcony and lobby as places to practice acoustical privacy outside the bedroom

- Stay in bedroom

  By using earphones in the bedroom, one can continue a phone call without worry of being overheard, so achieving the desired amount of acoustical seclusion.

The following figure depicts the current state of male bedrooms in the ISH UNISSULA based on the acoustical privacy preferences of the participants.

Figure 5.12 Places of acoustical privacy in Male ISH UNISSULA

Belongings Privacy in Male ISH UNISSULA

Only within the bedroom did male participants of ISH UNISSULAT practise privacy regarding their belongings. This type of privacy is typically observed to provide a sense of security when participants store their personal belongings or share and trust their personal items with housemates. To establish the privacy of participants' items at ISH UNISSULA, a list of procedures were performed.

- Distribution of space

  Every student occupant of ISH UNISSULA was provided with personal amenities such as a bed, wardrobe, desk, and chair. Thus, the personal amenities become the individual's personal space, which they are encouraged to maximise. This personal space becomes an unwritten agreement for occupants to use their own personal amenities and not interfere with the rights of other occupants in terms of utilising

185

their own. Additionally, if they use the personal amenities of other occupants, express permission must be obtained. And these are the self-considerations that residents of ISH UNISSULA demonstrate in terms of storing and utilising their own amenities and borrowing their roommates' amenities.

- Zoning

    Self-consideration practises motivate occupants to utilise their spaces for storage of their belongings. The participant mentioned that under the bed can serve as a personal storage place. Likewise, the area surrounding their bed, desk, and chair becomes an integral component of their zone.

Figure 5.13 Storing the belongings around the private zone

Even though the amenities given by ISH UNISSULA are rather comprehensive, some important items such as a wardrobe lock, a personal door lock, separate lighting, and a power outlet were missing. These little but necessary items should be supplied to increase the comfort and security of the residents.

Figure 5.14 Example of distribution and zoning in male ISH
UNISSULA

A. Sociability

The sociability practices among male participants of ISH UNISSULA practised in joint activities, rules establishment, agreements, and the existence of sociability spaces. Its practices visualized in the following figure and table about recap of findings regarding privacy establishment among 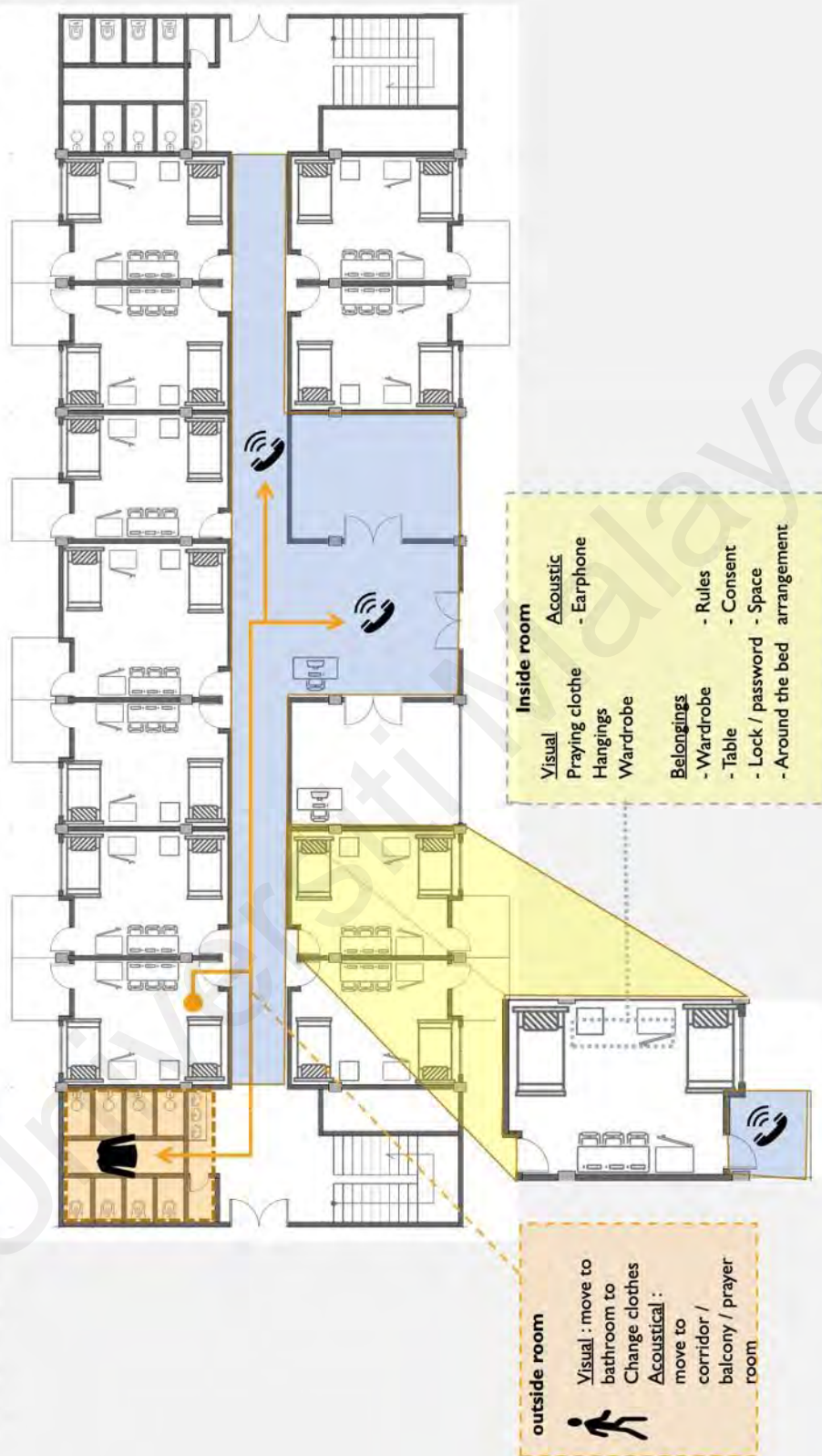male participants of ISH UNISSULA. Sociability practises and the establishment of privacy are intrinsically linked, as the two are interdependent. Therefore, sociability is the manifestation of respect for and maintenance of roommates' privacy. Furthermore, the following table and figure is the recap and visualization of the sociability practices among male participants of ISH UNISSULA.

Table 5.2 Recap of sociability establishment of male participants of ISH UNISSULA

Sociability in Male ISH UNISSULA		
Joint activities	Rules & agreements	Sociability spaces

- Entertainment
- Sharing
- Praying
- Security
- Cleaning
	Rules :
	  - Spoken
	  - Unspoken
	Agreements :
	  - Utilities
	  - Furniture
	  - Space
		- Lobby
		- Hall

Figure 5.15 Visualization of sociability practices among male participants ISH UNISSULA

- Joint activities

     The participants took the time to engage in joint activities with their roommates and housemates despite the intense schedule of lectures. Those activities usually practiced inside and outside the bedroom. The bedroom activities of the participants, such as playing games and watching movies on a laptop, sharing stories and laughing. Aside from that, there are additional activities that can strengthen their social bonds, such as securing the things of their housemates. Therefore, the activities of securing tighten the sociability and privacy aspect in belongings. In addition, cleaning is also the practise of establishing rules, which indirectly strengthens ties and disciplines the participants' cleanliness habits. The cleaning rules constitute the roommates' commitment to maintain the cleanliness of their shared bedroom.

     In addition, dining is the activity that participants engage in to strengthen their social connections. The ISH UNISSULA provides catering services for residents' meal service. Thus, mealtime is one of the most anticipated times for students because they can eat with their mates. Typically, they eat in the lobby or in their rooms with roommates. ISH UNISSULA's extracurricular activities consist of other joint activities performed outside the bedroom. The institution offers an archery programme that is often performed in the male ISH UNISSULA parking lot. The participants' participation in extracurricular activities will undoubtedly deepen their friendships among roommates and housemates.

- Sociability spaces

The practises of sociability occurred not just among roommates and housemates, but also when receiving guests from the outside. The ISH UNISSULA offers social areas, which include a lobby on the ground floor and a hall on each floor. The lobby is

available for receiving guests and family members. In the meanwhile, the hall can be used to have meetings with housemates or student guests.

Figure 5.16 Sociability activity in the bedroom (left) and outside the bedroom with dining (right)

Figure 5.17 Archery extracurricular as sociability activities performed outside the ISH building
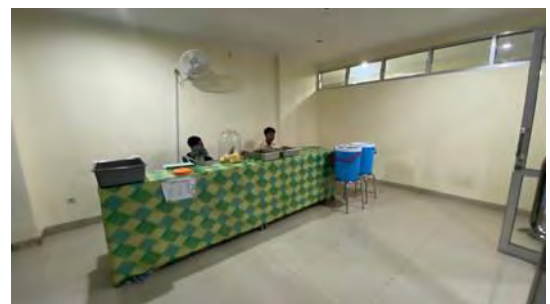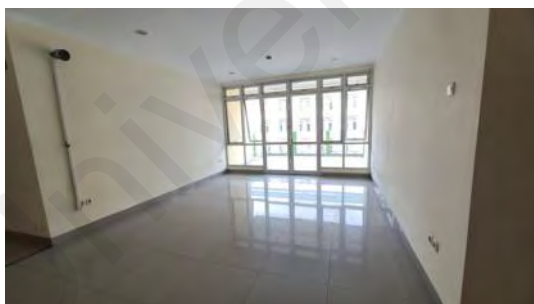
Figure 5.18 Hall on each floor (left) and lobby on ground floor (right)

Due to a shortage of facilities to accommodate guests, it is necessary to emphasise the social areas in this case. The hall is suitable for small-scale student discussions, but the absence of seating groups can diminish the hall's functionality. In addition, the lobby performed a dual purpose, receiving guests and distributing food catering. As a result, the

191

reception function of the lobby is weakened. In addition, the management of ISH encourage all prayer activities to take place in the mosque because there is insufficient space in ISH for prayer gatherings. Therefore, the design of ISH should include a spacious hall for congregational prayers and other Islamic activities, in the event that heavy rain prevents occupants from going to the mosque.

B. Orientation

The male ISH UNISSULA is located in close proximity to the ocean, and the university's male student housing building has a side that overlooks the spectacular coastline. As a result, the first orientation-related finding is that participants consistently selected view as their most prominent desired view. In addition to the ocean, participants chose view as their ideal building orientation. However, they stipulated that the view should be of greenery or a clean environment. Students chose to face their buildings into the wind as a second orientation option. They believed that the breeze's direction affected the level of comfort in their bedroom. In addition, the coastal and near-industrial areas of male ISH UNISSULA experience higher temperatures than the rest of the city. The male UNISSULA participants residing at ISH UNISSULA concluded that sun movement was the third finding among the building orientation factors they discovered. In addition, the replies of the individuals were classified into two categories: reluctance and sunlight liking. Those who valued exposure to natural light chose building orientations that faced the sunrise because it helped them feel more alert and revitalised in the morning. Those who opposed solar movement, on the other hand, were concerned about the thermal comfort of their bedrooms. In conclusion, a fascinating revelation about the participant is the cultural phenomena that he was unwilling to "tusuk sate" or erect a structure facing a T-intersection.

.

Table 5.3 Recap of building orientation preferences of male participants ISH UNISSULA

Orientation preferences			
View	Wind	Solar movement	Cultural
- Greenery - Clean environment	- Breeze air	Reluctant : - Avoiding sunset - Avoiding sunrise Preferably : - Towards sunrise	*Tusuk sate*
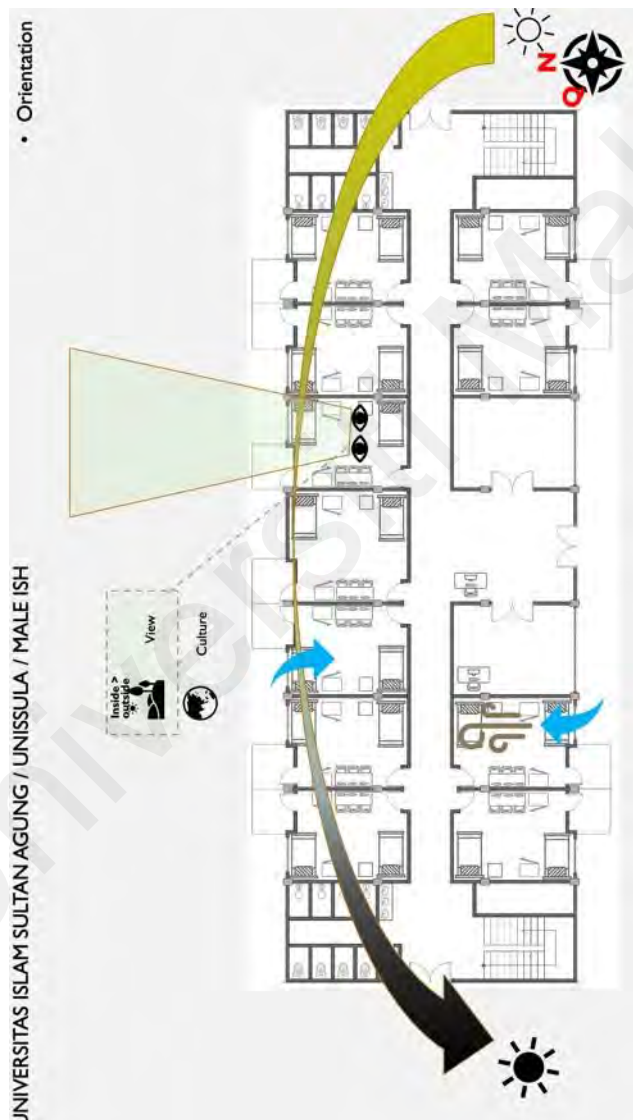
Figure 5.19 Visualization of building orientation preferences for male participants ISH UNISSULA

5.2.1.4. Female Participants Cross Analysis Findings of ISH UNISSULA

A FGD done with female PESANMASA students revealed that visual and audio privacy can be established either inside or outside the bedroom. While privacy of personal belongings is developed between roommates and established exclusively within the room itself. However, female students desired some privacy-related components for their own convenience.

A. Privacy

The privacy practices among male participants of ISH UNISSULA established in visual, acoustical, and belongings. Its practices visualized in the following figure and table about recap of findings regarding privacy establishment among male participants of ISH UNISSULA.

Table 5.4 Recap of privacy establishment of female participants of ISH UNISSULA

Privacy in Female ISH UNISSULA		
Visual	Acoustical	Belongings
In-room : - Curtain - Door - Wardrobe - Praying clothes - Space arrangements - Furniture arrangements	In-room : - Earphone - Blanket	In-room : - Rules - Consent - Self-consideration
Outside : - Bathroom	Outside : - Corridor/ balcony	Outside : - CCTV
Desired : - In-room bathroom - Layered window-glass - Female security officer		
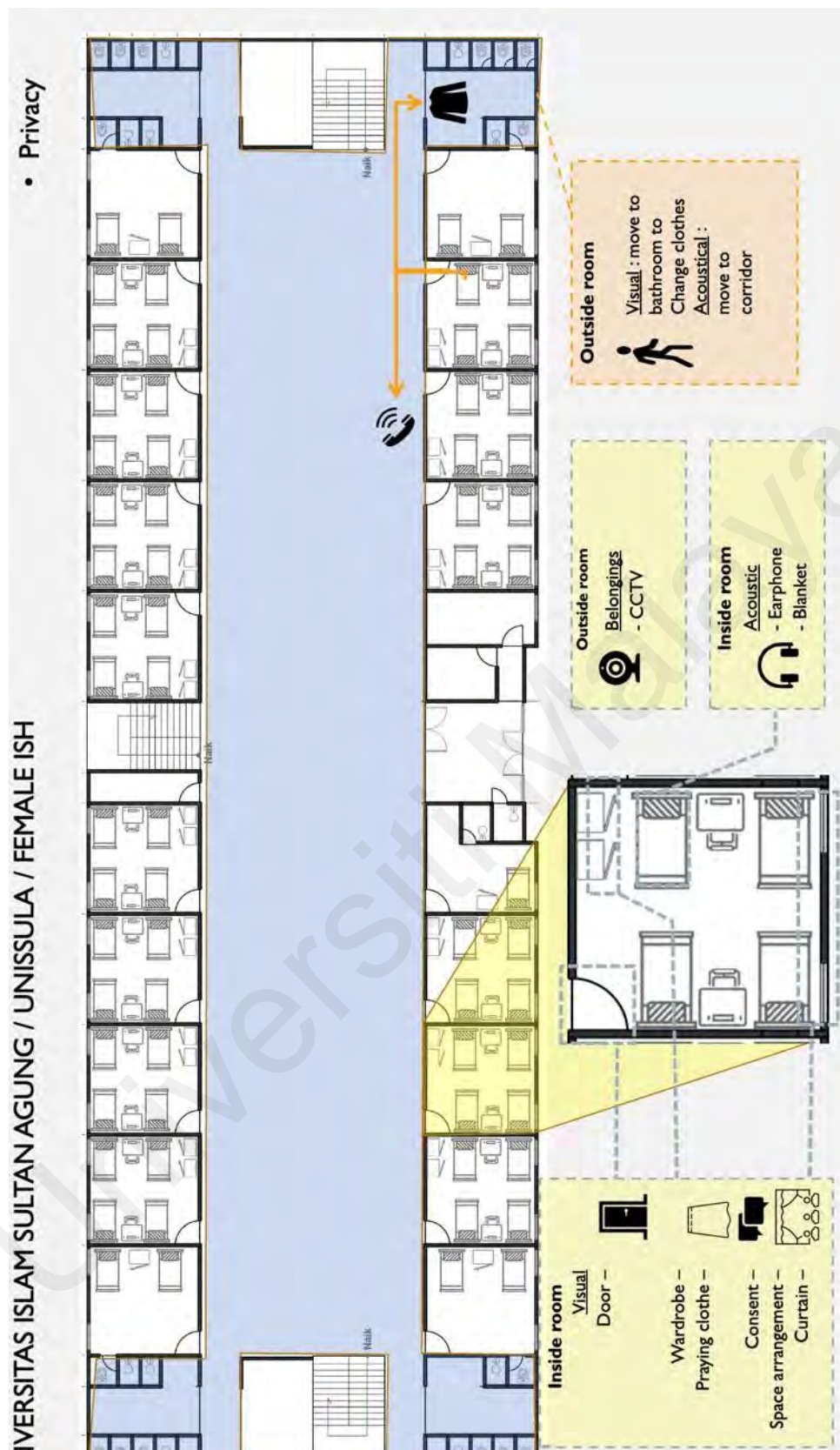
Figure 5.20 Visualization of privacy practices among female participants ISH UNISSULA

Visual Privacy in Female ISH UNISSULA

The visual privacy practiced by female participants of ISH UNISSULA conducted inside and outside room. Visual privacy normally practiced to make a secure feeling when participants changing clothes. In order to establish the visual privacy when participants changing clothes, some treatments were conducted.

a. Provided ISH Properties : Outside bathroom

Female ISH UNISSULA buildings have multiple bathrooms to accommodate their dwellers. Each floor has two bathroom areas, each with toilets and showers. Each floor has twenty-eight restrooms, which is sufficient to meet the students' needs for taking showers, using the toilet, and changing clothing. However, students tend to change their clothes in their rooms because it is more convenient. In order to guarantee visual privacy within the room, provided door and window curtain are sufficiently maintain their visual privacy.
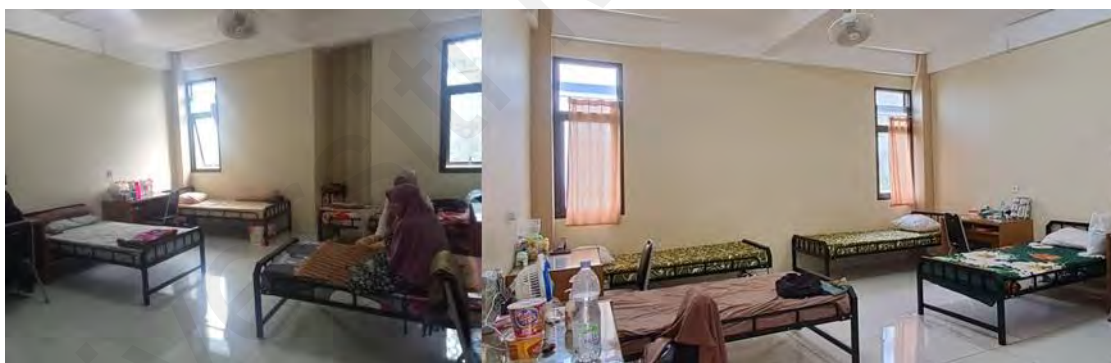
Figure 5.21 Bedroom condition of female ISH UNISSULA with curtain

b. Self-properties : praying clothes

To simplify and expedite the process of changing clothing, the participants decided to do so solely within the room. To maintain their privacy, however, participants used prayer clothes, such as sarongs, when changing clothes to visually conceal their body parts.

c. Arrangements : furniture and space

The wardrobe's dual-functionality is the next discovery in the realm of privacy. With certain arrangements, such as using the closet door, it is possible to increase the level of visual privacy while changing clothes in the room. Interestingly, students also create a tiny place for changing clothes in the corner of their shared bedroom by rearranging the furniture. This organisation of space has implications for another feature, namely sociability. Consequently, accommodating roommates through spatial arrangements to create a small area is part of sociability.

Even though the participants generally feel at ease and at home when living at ISH UNSSULA, they have visual privacy preferences that they would like to have that are not now available at ISH UNISSULA. For instance, the participants desired a layered window glass, such as sand-blast layered sticker on the glass to conceal visually from outside the ISH UNISSULA building. Participants also demand a private bathroom in the bedroom to maximise their privacy, so they may access the bathroom without leaving the bedroom. The final FGD finding regarding the privacy of female participants is a female security officer, as opposed to the existing male security officer who guards their female ISH. The following figure depicts the current state of male bedrooms in the ISH UNISSULA based on the privacy behaviours and preferences of the participants.
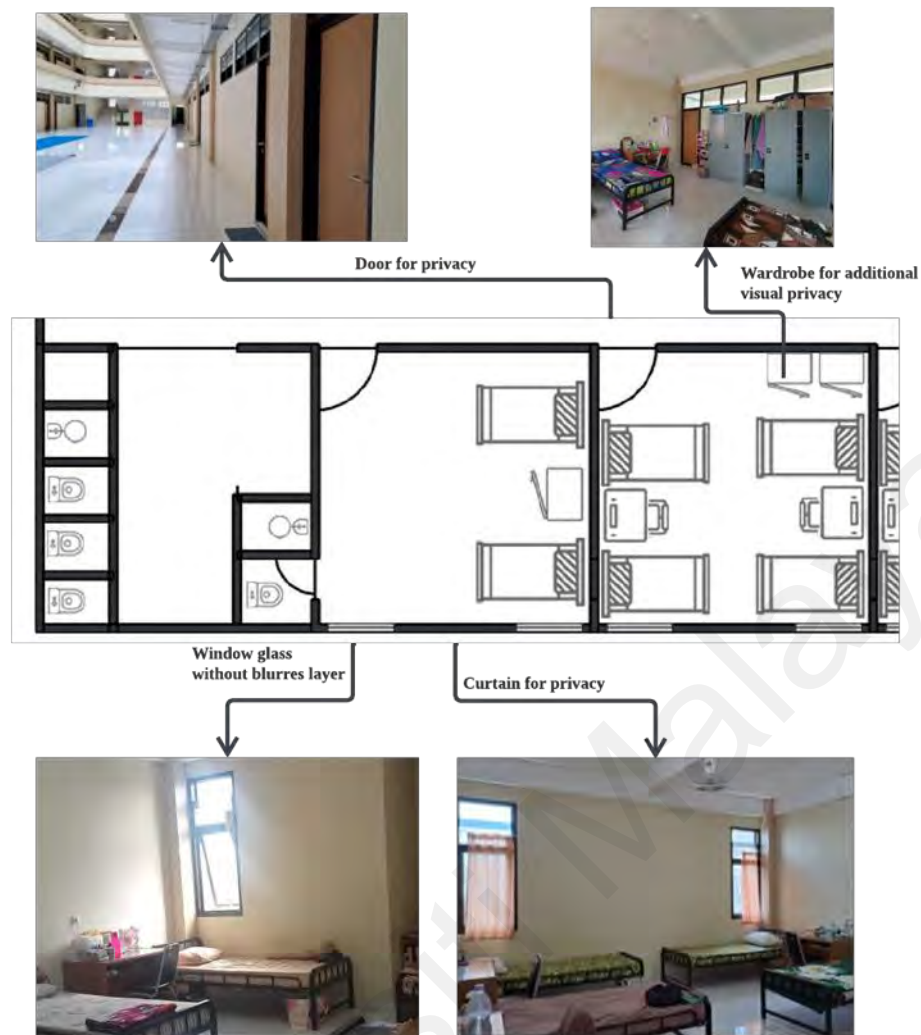
Figure 5.22 Current condition of female ISH UNISSULA for privacy practices

Acoustical Privacy in Female ISH UNISSULA

The acoustical privacy practiced by female participants of ISH UNISSULA conducted inside and outside room. Visual privacy normally practiced making a secure feeling when participants making phone call or having online meeting. In order to establish the acoustical privacy when participants in a private call or online meeting, some treatments were conducted.

- Leaving the bedroom

To ensure their acoustical privacy, participants must leave their rooms and answer their phones in other areas of the student housing complex, such as the balcony/ corridor that is nearest to their bedroom. This option permits students to preserve their acoustic privacy. The female ISH UNISSULA has multiple locations besides bedrooms to accommodate students with acoustic privacy requirements, such as corridor, hall, and lobby. However, those places lack such sitting groupings for students to utilise while taking calls or participating in online conferences.
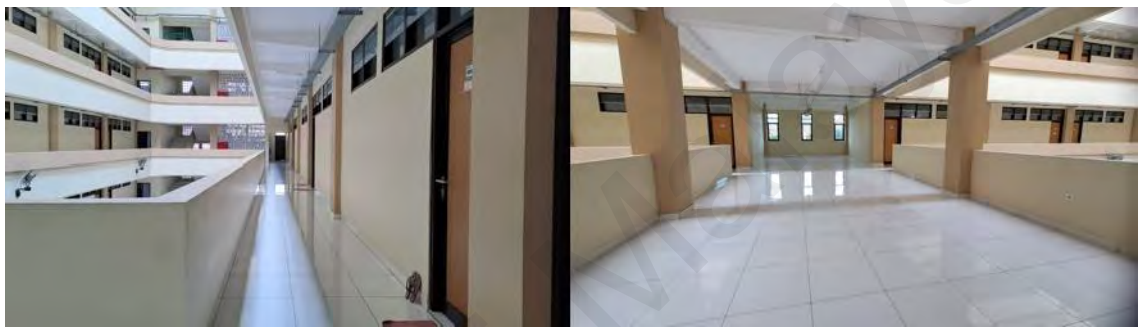
Figure 5.23 Front bedroom (left), central corridor (right) as places to practice acoustical privacy outside the bedroom

Figure 5.24 Lobby (left) and hall (right) as the potential places to practice acoustical privacy outside the bedroom

- Stay in bedroom

Using earphones in the bedroom allows one to continue a phone or online meeting conversation without fear of being overheard, so achieving the desired level of acoustical privacy. In addition, a female participant claimed that she will take calls

on the bed while covering her body with a blanket to limit the transfer voice and prevent roommates from overhearing.

The following figure depicts the current state of female bedrooms in the ISH UNISSULA based on the acoustical privacy preferences of the participants.

Figure 5.25 Places of acoustical privacy in female ISH UNISSULA

Belongings Privacy in Female ISH UNISSULA

The belongings privacy is typically observed to provide a sense of security when participants store their personal belongings or share and trust their personal items with housemates. To establish the privacy of female participants' items at ISH UNISSULA, a list of procedures were performed.

- Distribution of space

Female participants of ISH UNISSULA were provided with personal amenities such as a bed, wardrobe, desk, and chair. Thus, the personal amenities become the individual's personal space, which they are encouraged to maximise. This personal space becomes an unwritten and unspoken agreement for occupants to use their own personal amenities and not interfere with the rights of other occupants in terms of utilising their own. Additionally, if they use the personal amenities of other occupants, express permission must be obtained. And these are the self-considerations and unspoken rule that residents of ISH UNISSULA demonstrate in terms of storing and utilising their own amenities and borrowing their roommates' amenities. Besides that, the existence of CCTV also enhance their secure feeling when leaving the bedroom.

- Zoning

Self-consideration practises motivate occupants to utilise their spaces for storage of their belongings. The participant mentioned that under the bed can serve as a personal storage place. Likewise, the area surrounding their bed, desk, and chair becomes an integral component of their zone.
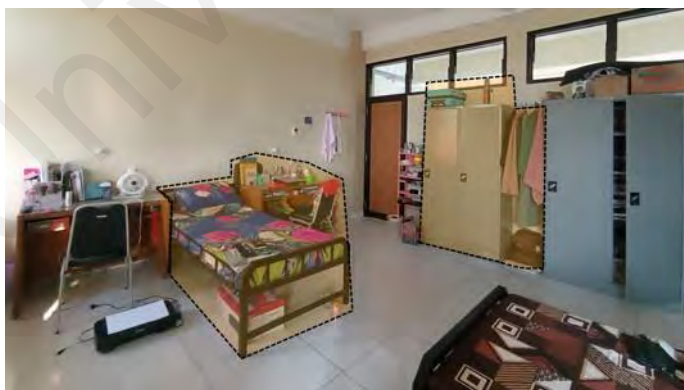
Figure 5.26 Storing the belongings around the private zone

Even though the amenities given by ISH UNISSULA are rather comprehensive, some important items such as a wardrobe lock, a personal door lock, separate lighting, and a power outlet were missing. These little but necessary items should be supplied to increase the comfort and security of the residents.

Figure 5.27 Distribution zoning and potential personal belongings in female ISH UNISSULA

A. Sociability

The sociability practices among female participants of ISH UNISSULA practised in joint activities, rules establishment, agreements, and the existence of sociability spaces. Furthermore, the following table and figure is the recap and visualization of the sociability practices among male participants of ISH UNISSULA.
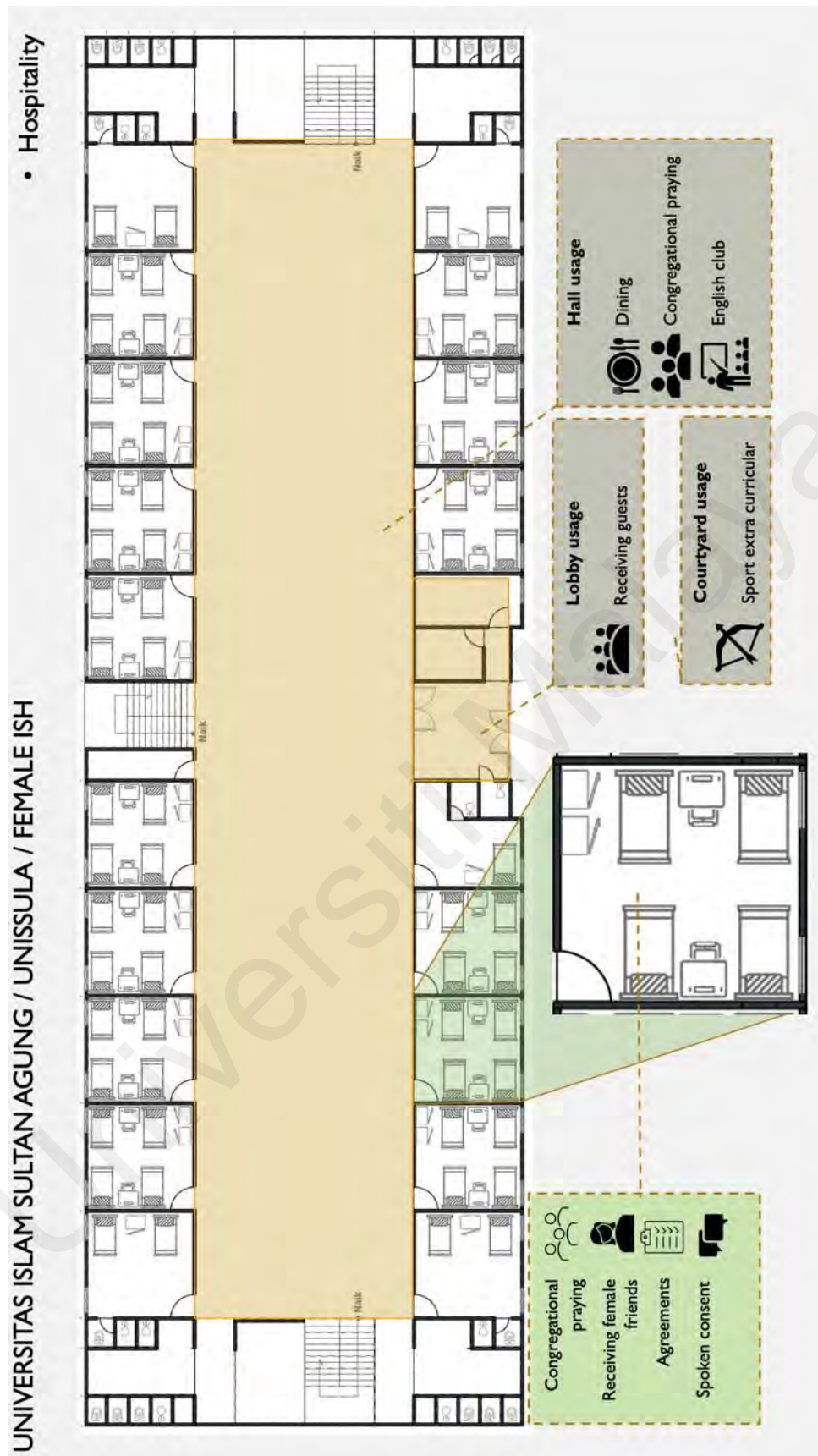
Figure 5.28 Visualization of sociability practices among female participants ISH UNISSULA

Table 5.5 Recap of sociability establishment of female participants of ISH UNISSULA

Sociability in Male ISH UNISSULA		
Joint activities	Rules & agreements	Sociability spaces

- Entertainment
- Sharing
- Praying
- Security
- Cleaning
	Rules :
	  - Spoken
	  - Unspoken
	Agreements :
	  - Utilities
	  - Furniture
	  - Space
		- Lobby
		- Hall

- Joint activities

Despite the intensive lecture schedule, the female participants of ISH UNISSULA made time for collaborative activities with their roommates and housemates. These activities are typically conducted both inside and outside of the bedroom. The participants' bedroom activities, such as watching films on a laptop, swapping stories and laughing. Aside from that, there are additional activities that can strengthen their social bonds, such as securing the things of their housemates. Therefore, the activities of securing tighten the sociability and privacy aspect in belongings. In addition, cleaning is also the practise of establishing rules, which indirectly strengthens ties and disciplines the participants' cleanliness habits. The cleaning rules constitute the roommates' commitment to maintain the cleanliness of their shared bedroom.

In addition, dining is the activity that participants engage in to strengthen their social connections. The ISH UNISSULA provides catering services for residents' meal service. Thus, mealtime is one of the most anticipated times for students because they can eat with their mates. Typically, they eat in the lobby or in their rooms with roommates. ISH UNISSULA's extracurricular activities consist of other joint activities performed outside the bedroom. The institution offers an archery

programme that is often performed in the female ISH UNISSULA parking lot. The participants' participation in extracurricular activities will undoubtedly deepen their friendships among roommates and housemates.

Figure 5.29 Joint activities among female students of ISH UNISSULA

- Sociability spaces

The practises of sociability occurred not just among roommates and housemates, but also when receiving guests from the outside. The ISH UNISSULA offers social areas, which include a lobby and hall on the ground floor. The lobby is available for receiving guests and family members. In the meanwhile, the hall can be used to have meetings with housemates or student guests or to held a students, lecture, and religious activities. Additionally, female participants of ISH UNISSULA also receive close female guests in the front door corridor and inside the bedroom.

Figure 5.30 Hall (left) and lobby (right) as sociability places in female ISH UNISSULA

The female ISH UNISSULA has accommodate the sociability practices completely. The hall is suitable for big-scale female student discussions and the lobby performed a dual

purpose, receiving guests and discussion room. The following is the visualization of sociability spaces based on the guests status to the occupants.
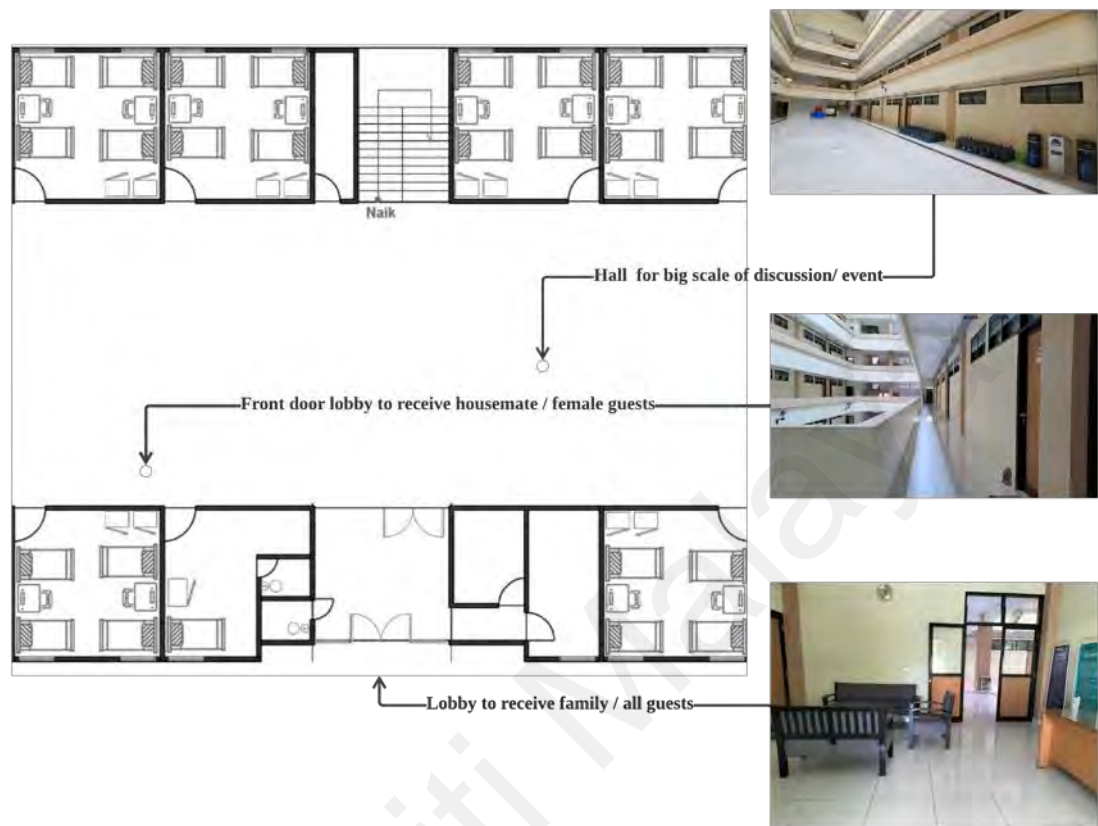
Figure 5.31 Sociability spaces based on the guests status to the occupants

B. Orientation

The FGD results from the analysis of female ISH UNISSULA indicate a correlation between building orientation preference and visual privacy. A participant in the FGD indicated that the window may compromise the visual privacy of their room, which is plainly visible from the exterior of the building. Furthermore, this presents a contradiction for female students at ISH UNISSULA, as opening the window and curtain will compromise their privacy, while closing the window or curtain will lower the amount of outside air and raise the room temperature. Therefore, the design of the window should fulfil its function as a ventilation without compromising the user's privacy. Specifically

for female ISH, the secondary skin or another model such as *mashrabiya*, an external window device that reduces glare while allowing air intake and ensuring privacy, should be utilised.

In addition, the female ISH UNISSULA is located near to the coastline, and the university's female student housing building boasts a view of the breathtaking coastline. In addition to the coastline, participants selected view as their preferred orientation for a building. In addition, as a second orientation option, students opted to face their buildings into the wind. They believed that the direction of the breeze affected how comfortable their bedroom sounded. Moreover, the coastal and industrial regions of female ISH UNISSULA experience higher temperatures than the rest of the city. The female occupants of ISH UNISSULA who participated in the UNISSULA study concluded that sun movement was one of the building orientation characteristics they discovered.

Table 5.6 Recap of building orientation preferences of female participants ISH UNISSULA

Orientation preferences			
Privacy	Wind	Solar movement	View
- Invisible from outside building	- Breeze air	- Thermal comfort	Coastal view
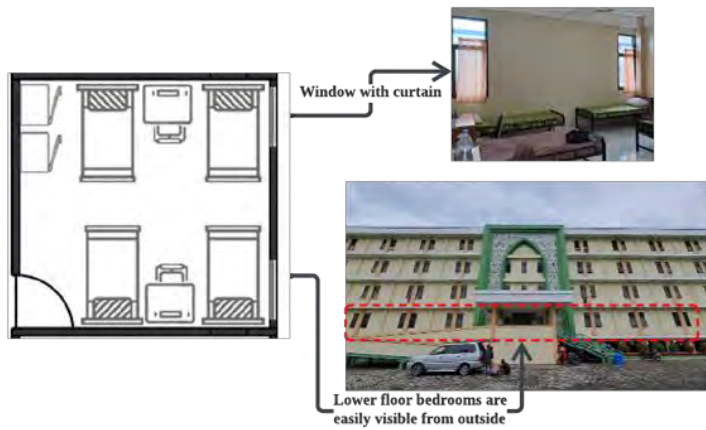
Figure 5.32 Window condition in terms of building orientation related to privacy
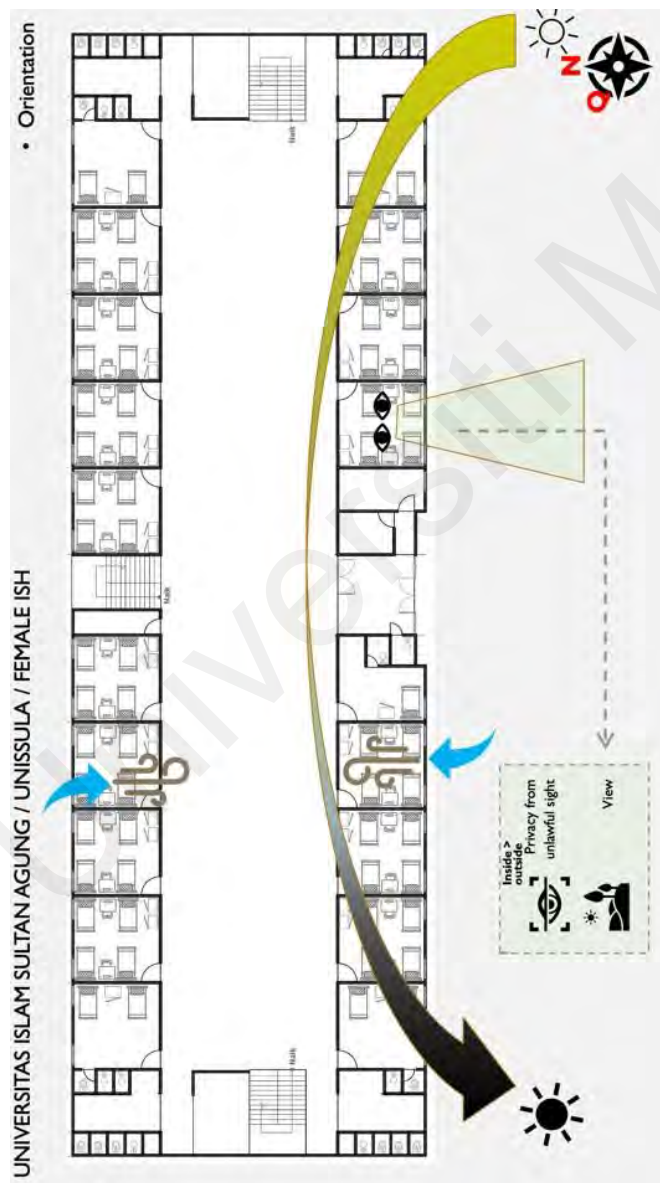
Figure 5.33 Visualization of building orientation preferences for female participants ISH UNISSULA

5.2.2. Findings of Universitas Muhammadiyah Semarang (UNIMUS)

Male participants of Islamic Student Housing (ISH) UNIMUS had a different "Atlas.ti" outcome than female participants in terms of links to three aspects: privacy, sociability, and orientation, as indicated by FGD data described in the preceding chapter. This FGD data will be thoroughly analysed and cross-referenced with secondary data such as floor plans and photographs. In terms of linkage codes, the ISH UNIMUS results for male and female participants are distinct. The FGD data of male participants revealed a relationship between privacy and sociability linked by the rules they have constructed. While the orientation aspect is distinct and unrelated to the two preceding aspects. On the other hand, female participants of ISH UNIMUS reported a substantial association between the three aspects of privacy, sociability, and orientation. As the male participants, the rules and agreements the have constructed connect privacy and sociability aspects. While building orientation preferences from female participants of ISH UNIMUS is closely related to the privacy due to the outside visibility awareness.

The FGD findings in UNIMUS shows that privacy has correlation with sociability in several ways, such as self-consideration and consent. Even the finding from female participants shows that privacy, sociability, and orientation correlated each other. The findings of both the FGD and the secondary data acquired from the research sites will be compared and contrasted in this sub-chapter. The cross analysis will most likely also disclose conditions that have not been discussed regarding the male ISH buildings that were built by UNIMUS and the female ISH buildings that were built by The Ministry of Public Works and Housings (MPWH).

5.2.2.1. Male Participants FGD Findings of ISH UNIMUS

Privacy

The mechanism of privacy in male students of ISH UNIMUS linked by the establishment of sociability outright. The correlation between privacy and sociability is interesting because intangible aspect, spoken consent and space agreements, bridging the privacy and sociability. However, the existence of spatial as tangible aspect also bridging those privacy and sociability in male student housing of UNIMUS. The following picture shows the FGD from male participants of ISH UNIMUS.
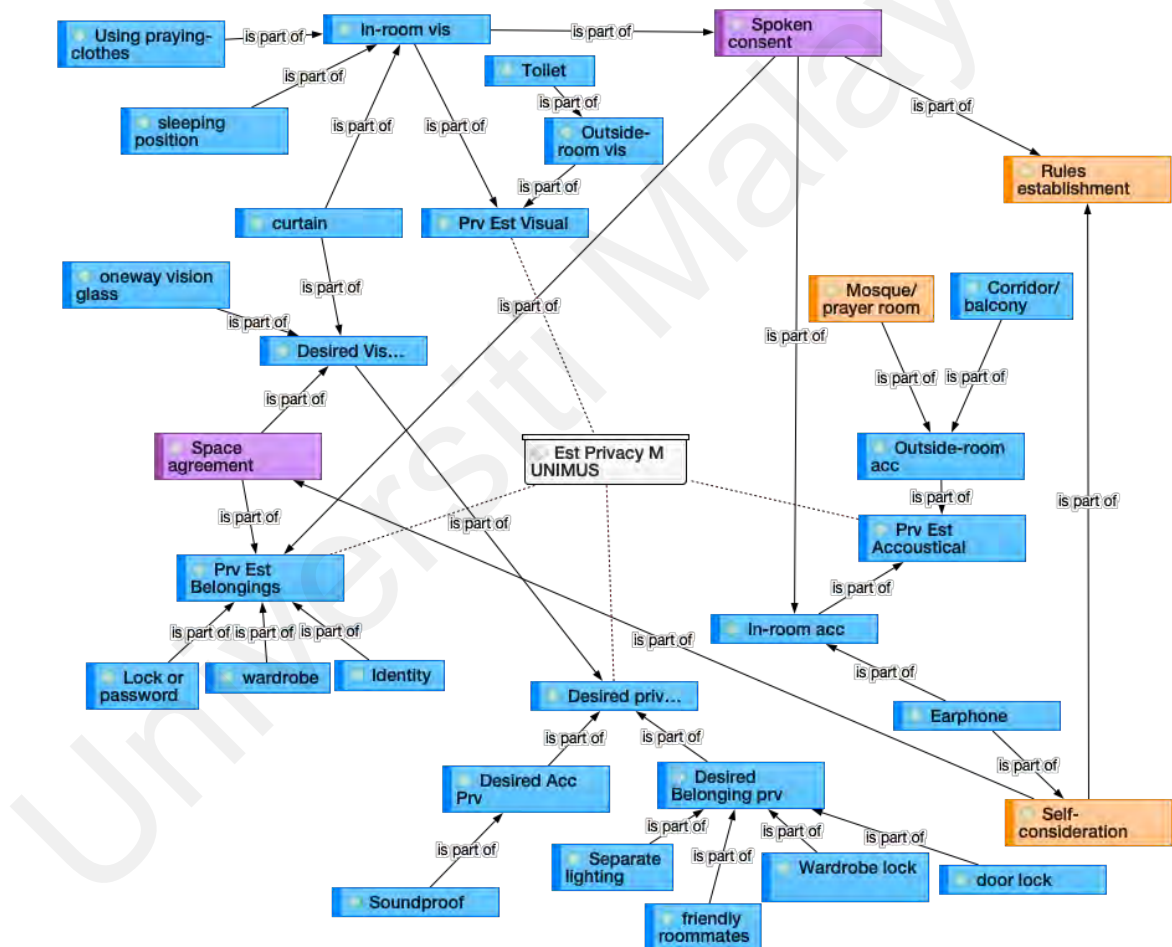
Figure 5.34 The establishment of privacy among male participants ISH UNIMUS

The total number of occupants in male ISH UNIMUS is less than male occupants of ISH UNISSULA. However, the mechanism of privacy was found to be more vibrant

with three prominent establishing aspects; visual, acoustical, and belongings. Analysis of FGD with male participants of ISH UNIMUS shows that visual and acoustical privacy established either inside or outside the bedroom. In the establishment of visual privacy, students use toilet as their changing room. However, they also will rather choose to change the clothes inside their multi-user bedroom by utilizing praying clothes, self-made curtain from hanging towel, or just simply ask their roommate in case need visual privacy. Furthermore, acoustical privacy inside the bedroom can be achieved using earphone to remain the call activity without getting overheard. The usage of earphone is also part of their consideration to avoid disturbance for their roommates. The other option to achieve their acoustical privacy by leaving the room and receive the phone call in certain places, such as corridor, balcony, or prayer room next to the building. Staying in a multi-user bedroom makes students adapt with their belongings privacy which allows them to know how to secure or even share their belongings. Locked wardrobe is their reliable furniture to secure their belongings. Additionally, identification or naming the belongings placed out of wardrobe is also their mechanism for belongings privacy. The experience of living in the student housing taught students to manage their spatiality for mutual convenience. Thus, they implemented the space arrangement to secure their belongings, so can provide spacious space for other room users. The most surprising aspect of the data finding is in the intangible aspects that create privacy. Written rules, spoken consent, or even the unspoken consent generate self-consideration in respecting roommates' privacy.

Nevertheless, students demanding some privacy aspects for their suitability and boost their experience during stay in student housing. As multi-user bedroom they desire separator or curtain to maintain their visual privacy while in the bedroom and tinted or one-way vision glass to generate their visual privacy from outsiders. Another desired privacy is that students desire personal lamp and power socket around their bedframe to

avoid scrambling electricity usage. For acoustical privacy, soundproof room is also something they desired to prevent from eavesdrop, external noise, and disturbing vibration from above floor. The next section of the data collection was concerned with sociability mechanism among male students in male ISH UNIMUS.

Sociability

The next aspect observed to the participants is how the perform the sociability between roommates, housemates, and guests. Figure below demonstrates some of the main characteristics of the sociability mechanism among male students in the male ISH UNIMUS.

Figure 5.35 The establishment of sociability on UNIMUS male student housing

The result of the correlation analysis between sociability and privacy are shown in purple and blue codes; spoken consent and space agreements. The correlation between

privacy and sociability mechanism is interesting because connected by intangible aspects. The sociability mechanism among the male students in PONPES Tahfidz reported that the intangible aspects has the majority in the implementation. Six joint activities are reportedly done by occupants that believed boost their social connectedness and creates sociability among occupants. Some fun activities such as playing game, watching film, singing, cooking, share the stories and laughter are seemingly establish their togetherness. PONPES Tahfidz as Islamic student housing is inexorably full-filling students with Islamic activities. Thus, reminding each other to perform the faith activity is remarkably found as intangible things to create sociability among students. Furthermore, rules and agreements as intangible aspects in sociability were implemented by students. Spoken and unspoken rules practiced appropriately by students' group or institution as discipline training and amazingly practices connect students to get closer. Eventually, the existence of guest spaces as the tangible aspect of sociability comprises as the facility to receive guests. The guest spaces is a standard design to welcome guests and utilized by students for their private and communal activities.

Orientation

The findings of the FGD analysis with regard to the values of orientation as students occupant are displayed up there in Figure 5.36 below.

Figure 5.36 The desired orientation on UNIMUS male student housing

The desired building orientation in the current findings are quite similar to findings in male student housing UNISSULA. The inquiries about building orientation discovered that the participants were unanimous in the view that their desired building orientations aspects are determined by view, wind, solar movement, and cultural thing. PONPES Tahfidz is located in the dense neighborhood of Semarang. Hence, first finding regarding orientation is that participants choose view as their prominent desired view steadily. Participants anticipate view as their desired building orientation such as facing the greeneries or clean environment. Secondly, wind was the choice of students for their building orientation. They reasoned that windy direction controls their bedroom comfort. Thirdly, solar movement is the third findings in building orientation aspects determined by students of UNIMUS staying in PONPES Tahfidz. Furthermore, participants' answers divided by two options, reluctant and preferably to sunlight. Participants who had preference to sunlight were choosing sunrise to their natral lighting. In the other hand those who reluctant to solar movement reasoned to bedroom thermal comfort. Lastly, an

214

interesting finding of participant is the cultural thing, that he was unwilling to *tusuk sate* or building facing T-junction.

5.2.2.2. Female Participants FGD Findings of ISH UNISSULA

This section will explain about the analysis from FGD data with female participants of Female Islamic Student Housing (ISH) Universitas Muhammadiyah Semarang (UNIMUS). Excitingly, the three aspects of spatiality in female participants have connected each other. Thus, the explanation of three aspects; privacy, sociability, and orientation will be explained separately due to the complexity and linking to each other aspects.

Privacy

The establishment of privacy among female occupants of female ISH UNIMUS shows rather comprehensive rather than female UNISSULA student housing. Nevertheless, privacy aspect findings have implication to other aspects, sociability, and orientation. The figure below shows the findings from FGD with female participants of ISH UNIMUS regarding privacy establishment.

Figure 5.37 The establishment of privacy on UNIMUS female student housing

The establishment of visual privacy on female PONPES UNIMUS consist of simple outside-room privacy, and more complex in-room visual privacy. Outside-room privacy also has the implication to their desired orientation to prevent from outsiders' unlawful sight. The inquiries to participants prove that they will maintain their visual privacy by changing clothes in the bathroom. Furthermore, in-room visual privacy discovered interesting findings with an implication to sociability aspect. In-room visual privacy argues that trust between roommates that generates from spoken consent and self-consideration creates a solid visual privacy. Wardrobe play significant role in the establishment of visual privacy in multi-user bedroom and has double aspect functions. With certain arrangement, such as utilize the wardrobe door, can increase the visual privacy level while changing clothes inside the room. Another surprising finding is the usage of praying clothes / praying robe to ease the changing clothes activity without leaving the bedroom but remain the visual privacy. Bedding such as blanket can also a tool to maintain their visual privacy during staying in the bedroom. However, the existence of door is still considered as the most basic building element for privacy and determine the privacy, security, and spatiality.

In acoustical privacy, female students of UNIMUS resided in female PONPES tend to implement it in simple way. The acoustical privacy they were need mostly during phone call or online meeting. To achieve the acoustical privacy inside the room, they just simply using earphone during phone call or online meeting. They will also adjust the volume for their own privacy and other occupants' convenience. Residing in student housing for more than two consecutive years provide them an experience in self-consideration and respecting other's privacy. Additionally, students will also having their phone call or achieve their acoustical privacy by leaving the room and receive it on the corridor, balcony, or any quiet area.

Whereas, the mechanism of belongings privacy by participants was much simple but has an implication to sociability aspects. Well established sociability among multi-bedroom users emerges a secure feel for students to store their belongings inside the bedroom. Spoken consent to their roommates and implemented self-consideration from unspoken consent that manifested by social connectedness create an intangible security element. Hence, there was a significant positive correlation between sociability and belongings privacy among female students in UNIMUS female student housing. The wardrobe was also their prominent tangible element to secure their belongings. Additionally, identification or naming the belongings placed out of wardrobe is also their mechanism for belongings privacy. The experience of living in the student housing taught students to manage their spatiality for mutual convenience. FGD analysis finds participants' desired privacy in their student housing. encompass building material, furniture, utilities, and spatial arrangement. Soundproof building material is something that desired to prevent from eavesdrop, external noise. Personal study desk with lamp are also their desired aspect to avoid scrambling furniture and electricity usage. Lastly, dedicated fitting room inside the room was the desired privacy for their room to maintain their visual privacy.

Sociability

Figure 5.38 The establishment of sociability on UNIMUS female student housing

The hall of female PONDOK UNIMUS building is considerably a significant space for sociability practices. Some activities such as extra-curricular, praying, and receiving guests can be done in the hall. Naturally, bedroom also provides sociability to enhance their social-connectedness with roommates and also can be a place to receiving close guests. Furthermore, rules and agreements as intangible aspects in sociability were applied by students. Spoken, unspoken, written, and unwritten rules practiced accordingly by students' circle or institution for the sake of discipline training and surprisingly those connect students to be more intimate.

Orientation

Figure 5.39 The desired orientation on UNIMUS female student housing

The results of the FGD analysis regarding orientation as locality values are obtainable in the Figure 5.39 above. The desired building orientation in analysis found Qibla as a significant aspect. Another findings of the enquiry are view, solar movement, and privacy. Female PONPES UNIMUS building is situated inside the area of campus and surrounded by other university buildings. Hence, the finding regarding orientation is that participants indicate view as their desired view. In addition, solar movement is the third findings in building orientation aspects determined by students of UNIMUS staying in PONPES. They were desire sunrise and natural lighting from the solar movement aspect. Furthermore, finding in orientation enquiry of participant is the privacy to avoid the window direction towards public area.

5.2.2.3. Male Participants Cross Analysis Findings of ISH UNIMUS

A FGD done with male participants of ISH UNIMUS students revealed that visual and audio privacy can be established either inside or outside the bedroom. While privacy of personal belongings is developed between roommates and established exclusively within the room itself. However, male students desired some privacy-related components for their own convenience.

A. Privacy

The privacy practices among male participants of ISH UNIMUS established in visual, acoustical, and belongings. Its practices visualized in the following figure and table about recap of findings regarding privacy establishment among male participants of ISH UNIMUS.
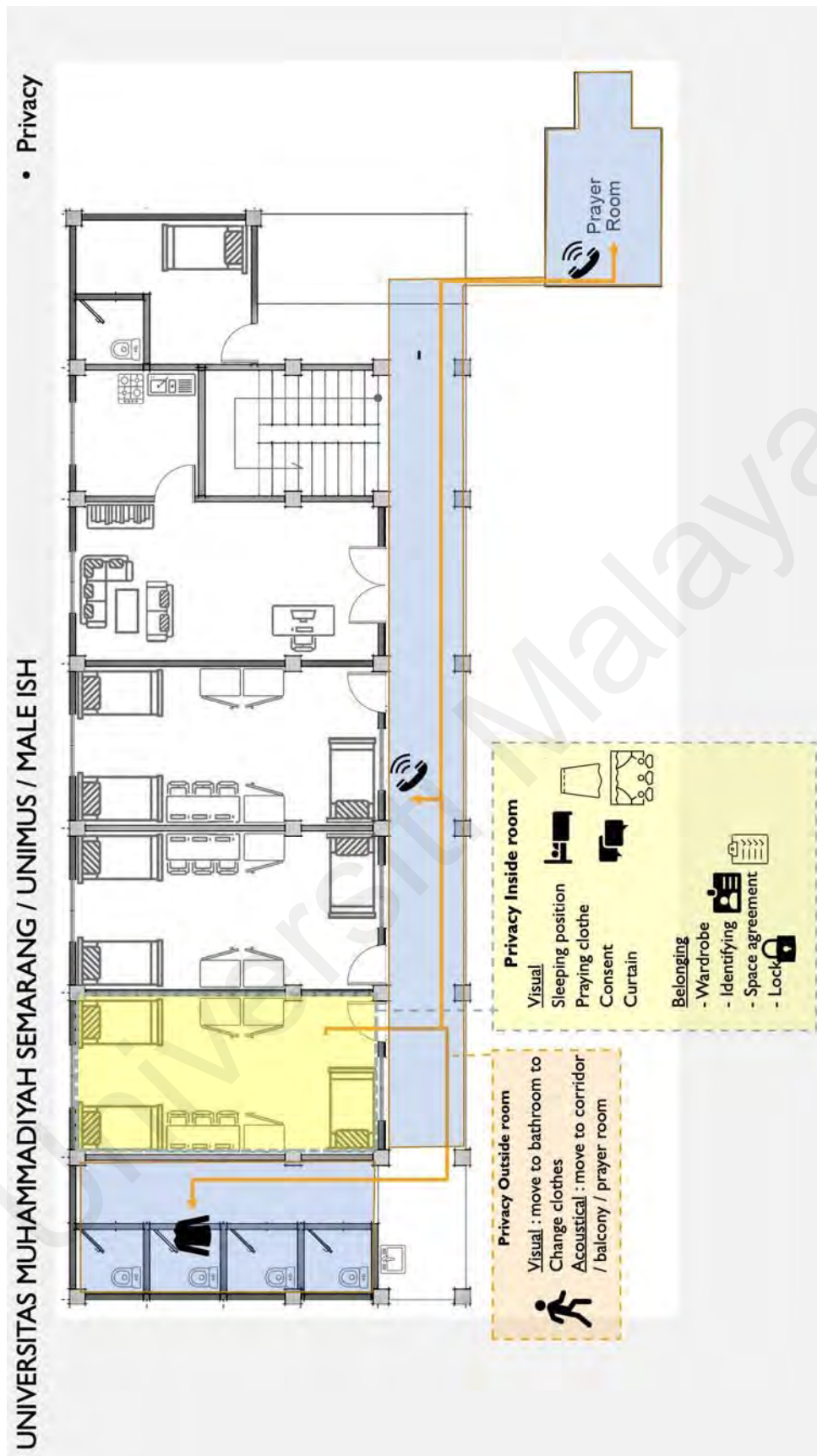
Figure 5.40 Visualization of privacy practices among male participants ISH UNIMUS

Table 5.7 Recap of privacy establishment of male participants of ISH UNIMUS

Privacy		
Visual	Acoustical	Belongings
In-room : - Curtain - Sleeping position - Using praying clothes - Consent	In-room : - Earphone - Self-consideration - Consent	In-room : - Space agreement - Password - Wardrobe - Identifying - consent
Outside : - bathroom	Outside : - Mosque / prayer room - Corridor / balcony	
Desired : - Curtain - Layered window-glass	Desired : - soundproof	

Visual Privacy in Male ISH UNIMUS

The visual privacy practiced by male participants of ISH UNIMUS conducted inside and outside room. Visual privacy normally practiced to make a secure feeling when participants changing clothes. In order to establish the visual privacy when participants changing clothes, some treatments were conducted.

- Provided ISH Properties : Outside bathroom

Male ISH UNIMUS buildings have multiple bathrooms to accommodate their dwellers. Each floor has two bathroom areas, each with toilets and showers. Each floor has sixteen restrooms, which is sufficient to meet the students' needs for taking showers, using the toilet, and changing clothing. However, students tend to change their clothes in their rooms because it is more convenient. In order to guarantee visual privacy within the room, participants claimed that prayer clothes is required, as explained in the following section.

- Self-properties : praying clothes

  To simplify and expedite the process of changing clothing, the participants decided to do so solely within the room. To maintain their privacy, however, participants used prayer clothes, such as sarongs, when changing clothes to visually conceal their body parts. In addition, consent was noticed as the simplest way to achieve visual privacy, by asking the roommates not to see while the participant was changing clothing.

- Arrangements : hanging towels/ fabrics

  Regarding the visual privacy achievement in changing clothes, participants will use the materials hung on their bunk beds to cover their bodies when changing clothing.

Figure 5.41 Hanging towels and fabric for visual privacy

Even though the participants generally feel at ease and at home when living at ISH UNIMUS, they have visual privacy preferences that they would like to have that are not now available at ISH UNIMUS. For instance, the participants desired a curtain for their bunk bed to conceal their sleeping activities. In addition, the participants wished for a separator that could be used to change clothes, so that they could do it without wearing prayer clothes. Furthermore, participants also expecting a layered window glass, such as sand-blast layered sticker on the glass to conceal visually from outside the ISH UNISSULA building. The following figure depicts the current state of male bedrooms in the ISH UNISSULA based on the privacy behaviours and preferences of the participants.
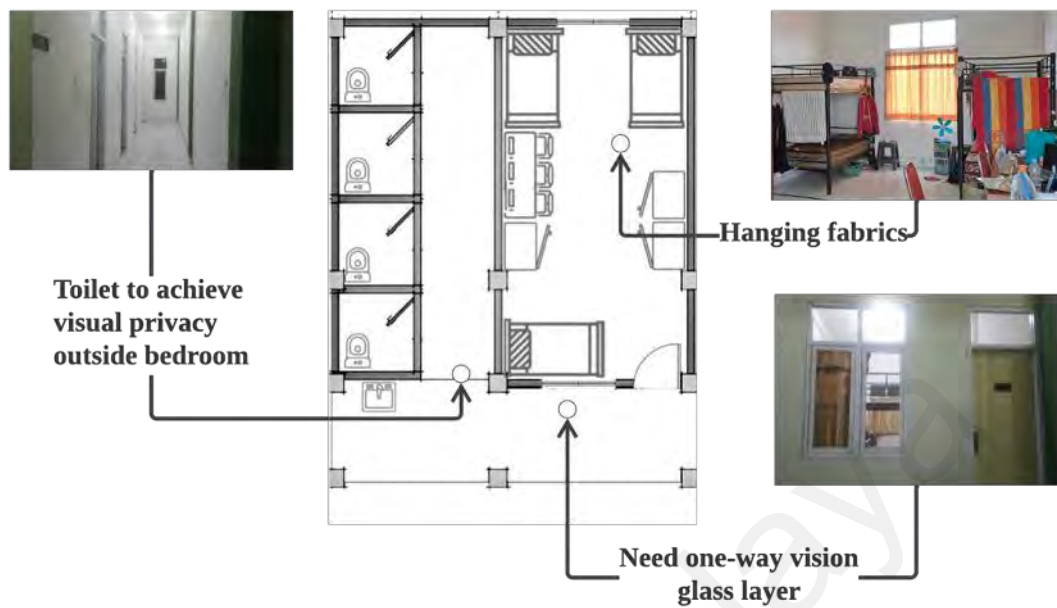
Figure 5.42 Current condition of male ISH UNIMUS for privacy practices

Acoustical Privacy in Male ISH UNIMUS

The acoustical privacy practiced by male participants of ISH UNIMUS conducted inside and outside room. Visual privacy normally practiced to make a secure feeling when participants making phone call or having online meeting. In order to establish the acoustical privacy when participants in a private call or online meeting, some treatments were conducted.

- Leaving the bedroom

  To ensure their acoustical privacy, participants must leave their rooms and answer their phones in other areas of the student housing complex, such as the corridor, guest room, or the mosque. This option allows students to preserve their acoustical privacy.

- Stay in bedroom

Using headphones in the bedroom allows one to continue a phone conversation without fear of being overheard, so achieving the desired level of acoustic privacy. In addition, residents who practise self-consideration create a space for their roommates to have a private conversation or meeting by leaving the room occupied by a member on the phone or remaining silent throughout his call.

The following figure depicts the current state of male bedrooms in the ISH UNISSULA based on the acoustical privacy preferences of the participants.
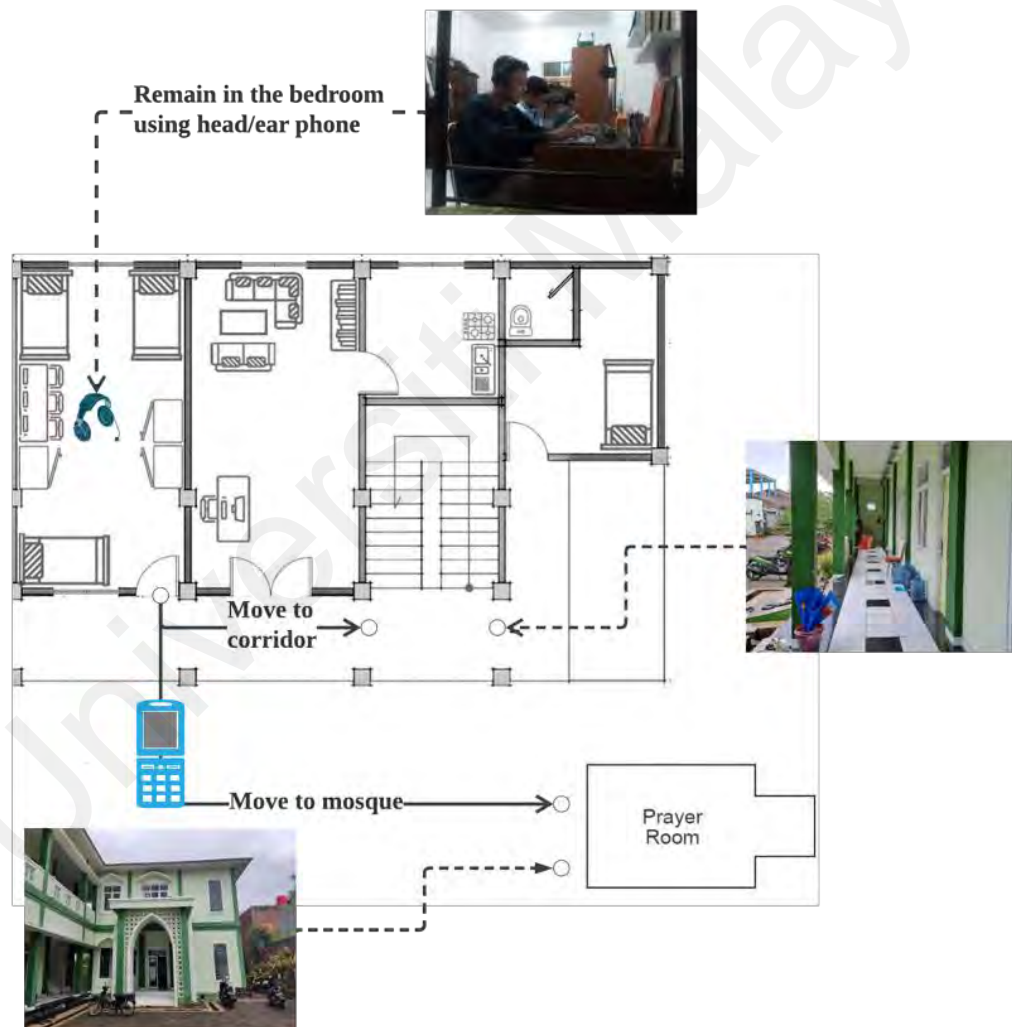
Figure 5.43 Places of acoustical privacy in Male ISH UNISSULA

Belongings Privacy in Male ISH UNISSULA

Only within the bedroom did male participants of ISH UNIMUS practise privacy regarding their belongings. This type of privacy is typically observed to provide a sense of security when participants store their personal belongings or share and trust their personal items with housemates. To establish the privacy of participants' items at ISH UNISSULA, a list of procedures were performed.

- Distribution of space

   Every student occupant of ISH UNISSULA was provided with personal amenities such as a bed, wardrobe, desk, and chair. Thus, the personal amenities become the individual's personal space, which they are encouraged to maximise. This personal space becomes an unwritten agreement for occupants to use their own personal amenities and not interfere with the rights of other occupants in terms of utilising their own. Additionally, if they use the personal amenities of other occupants, express permission must be obtained. And these are the self-considerations that residents of ISH UNIMUS demonstrate in terms of storing and utilising their own amenities and borrowing their roommates' amenities.

- Zoning

   Self-consideration practises motivate occupants to utilise their spaces for storage of their belongings. The participant mentioned that under the bed can serve as a personal storage place. Likewise, the area surrounding their bed, desk, and chair becomes an integral component of their zone.

- Identifying

   By affixing a name tag to one's personal goods, one can confirm their ownership and avoid having them switched with other housemates.

Even though the amenities given by ISH UNISSULA are rather comprehensive, some important items such as a wardrobe lock, a personal door lock, separate lighting, and a power outlet were missing. These little but necessary items should be supplied to increase the comfort and security of the residents.

Figure 5.44 Practices of distribution space and zoning in male ISH UNIMUS

A. Sociability

The sociability practices among male participants of ISH UNIMUS practised in joint activities, rules establishment, agreements, and the existence of sociability spaces. Its practices visualized in the following figure and table about recap of findings regarding privacy establishment among male participants of ISH UNIMUS. Sociability practises and the establishment of privacy are intrinsically linked, as the two are interdependent. Therefore, sociability is the manifestation of respect for and maintenance of roommates'

privacy. Furthermore, the following table and figure is the recap and visualization of the sociability practices among male participants of ISH UNIMUS.

Table 5.8 Recap of sociability establishment of male participants of ISH UNIMUS

Sociability in Male ISH UNISSULA		
Joint activities	Rules & agreements	Sociability spaces

- Entertainment
- Sharing
- Praying
- Security
- Cleaning
- Cooking
	Rules :
	  - Spoken
	  - Unspoken
	Agreements :
	  - Furniture
	  - Space
		- Mosque
		- Courtyard
		- Communal room
		- Guest bedroom
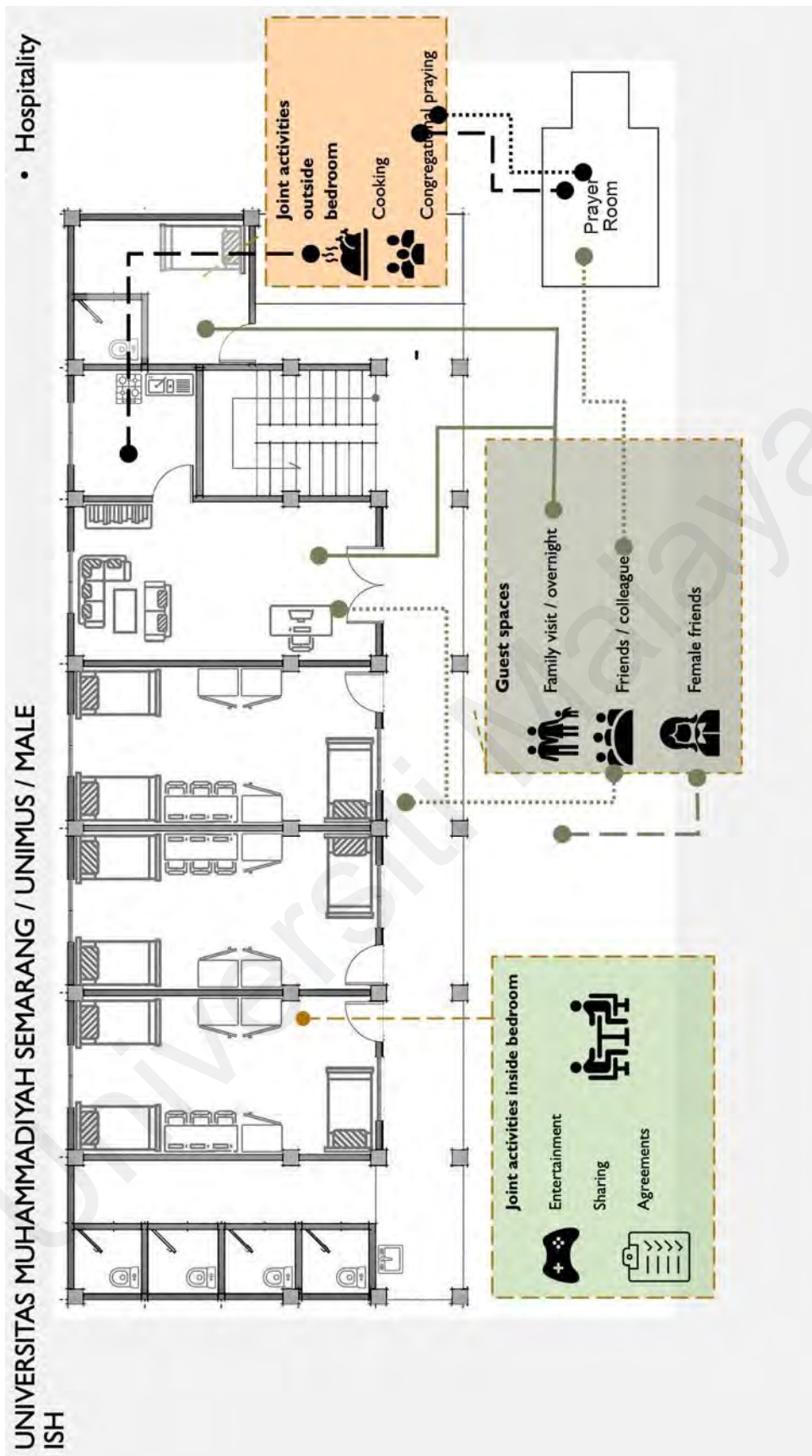
Figure 5.45 Visualization of sociability practices among male participants ISH UNIMUS

- Joint activities

  Despite the demanding teaching schedule, the participants engaged in joint activities with their roommates and housemates. These actions are typically conducted both inside and outside of the bedroom. The members' bedroom activities, such as playing video games and watching films on a laptop, sharing stories and laughing. In addition, there are other activities that might build their social bonds, such as protecting their housemates' belongings. Therefore, the activities of security tighten the element of belongings' sociability and privacy. Additionally, cleaning is the practise of setting norms, which indirectly develops relationships and disciplines participants' cleanliness habits. The roommates' commitment to maintaining the cleanliness of their shared bedroom is represented by the cleaning rules.

  In addition, cooking is the activity that participants engage in to strengthen their social connections. The ISH UNIMUS provides catering services for occupants' meal preparation need. Thus, cooking is one of the most anticipated times for students because they can eat with their mates. Typically, they eat in the communal-room or in their rooms with roommates. ISH UNIMUS's extracurricular activities consist of other joint activities performed outside the bedroom. The institution offers an religious programme that is often performed in the male mosque next to the male ISH UNIMUS building. The participants' participation in extracurricular activities will undoubtedly deepen their friendships among roommates and housemates.

- Sociability spaces

  Social practises occurred not only among roommates and housemates, but also when receiving outside guests. The ISH UNISSULA provides social areas such as a mosque, courtyard, common room, and guest bedroom. The mosque may accommodate male visitors, family members, and official religious gatherings. In the

meanwhile, the communal space will also host male guests, official guests, and discussions. Additionally, the male ISH UNIMUS offers a guest bedroom for overnight guests. In addition, the remainder of the social area consists of a courtyard for receiving female friends. Due to privacy and gender restrictions, only female visitors can be received in the courtyard.

Figure 5.46 Sociability practices in religious activities

Figure 5.48 Joint activities in cooking that can also held on the courtyard

Figure 5.47 Joint activities in dining that can also held in the mosque and corridor

With the provision of the aforementioned guest areas, the male ISH UNIMUS building accommodates sociability practises effectively. Male ISH UNIMUS students will learn through the sociability practises how to respect guests without compromising their privacy or gender segregation.

Figure 5.49 Sociability spaces for joint activities in male ISH UNIMUS

B. Orientation

The male ISH UNIMUS is situated inside the area of campus and surrounded by other university buildings. Hence, the finding regarding orientation is that participants indicate view as their desired view. In addition, solar movement is the third findings in building orientation aspects determined by students of UNIMUS staying in ISH. They were desire sunrise and natural lighting from the solar movement aspect. Furthermore, finding in orientation enquiry of participant is the privacy to avoid the window direction towards public area.

Table 5.9 Recap of building orientation preferences of male participants ISH UNISSULA

Orientation preferences			
View	Wind	Solar movement	Cultural
- Greenery - Clean environment	- Breeze air	Reluctant : - Avoiding sunset - Avoiding sunrise Preferably : - Natural lighting	*Tusuk sate*
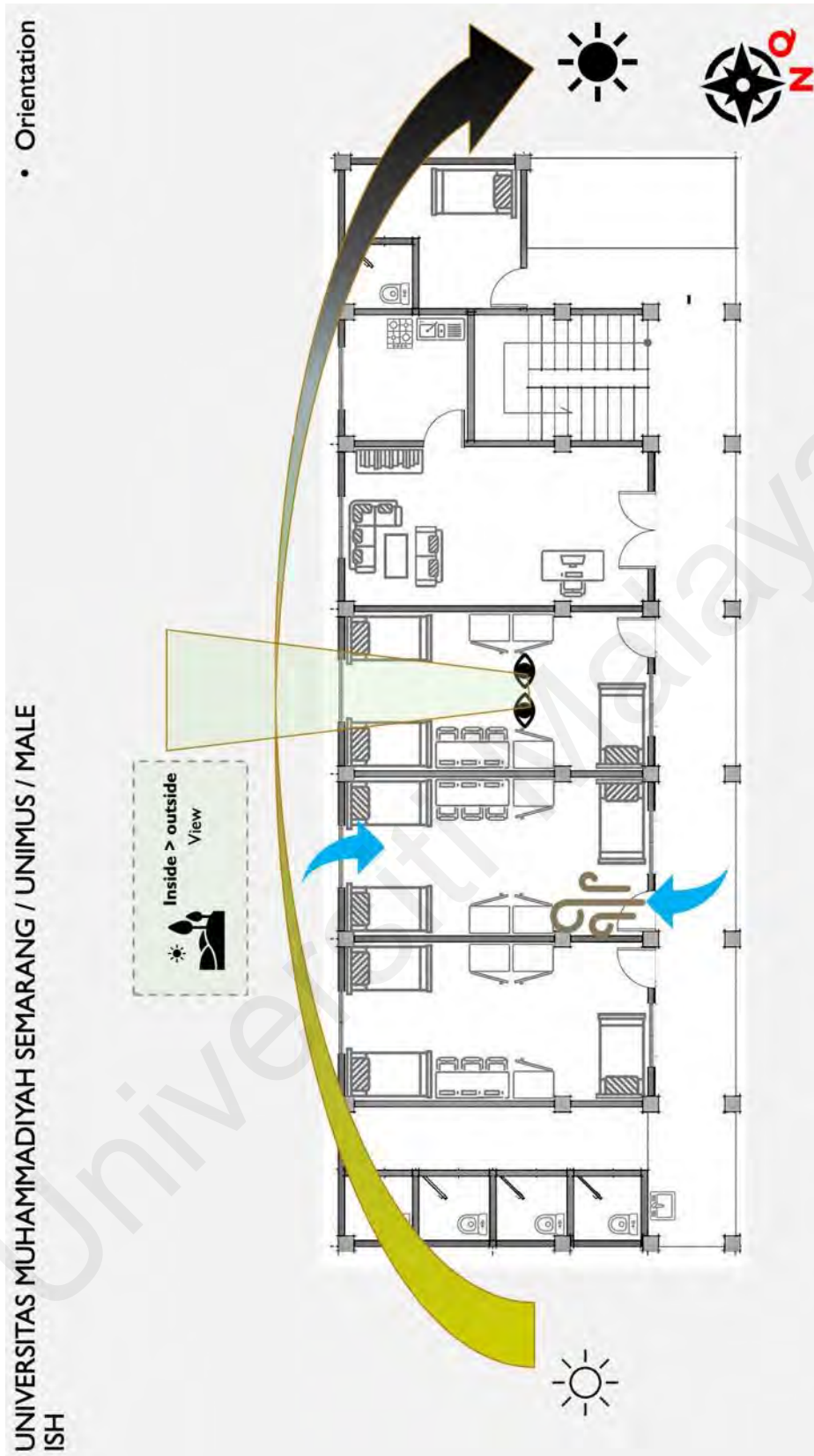
Figure 5.50 Visualization of building orientation preferences for male participants ISH UNIMUS

5.2.2.4. Female Participants Cross Analysis Findings of ISH UNIMUS

A FGD done with female ISH UNIMUS students revealed that visual and audio privacy can be established either inside or outside the bedroom. While privacy of personal belongings is developed between roommates and established exclusively within the room itself. However, female students desired some privacy-related components for their own convenience.

A. Privacy

The privacy practices among female participants of ISH UNIMUS established in visual, acoustical, and belongings. Its practices visualized in the following figure and table about recap of findings regarding privacy establishment among female participants of ISH UNIMUS.

Table 5.10 Recap of privacy establishment of female participants of ISH UNIMUS

Privacy in Female ISH UNIMUS		
Visual	Acoustical	Belongings
In-room : - Lamp adjustment - Door lock - Wardrobe - Bedding - Praying clothes - Self-consideration	In-room : - Earphone - Volume adjustment	In-room : - Wardrobe - Spoken consent - Identifying
Outside : - Bathroom	Outside : - Corridor/ balcony	
Desired : - Curtain - Fitting room - Private lamp adjustment	Desired : Soundproof	Desired : Private furniture
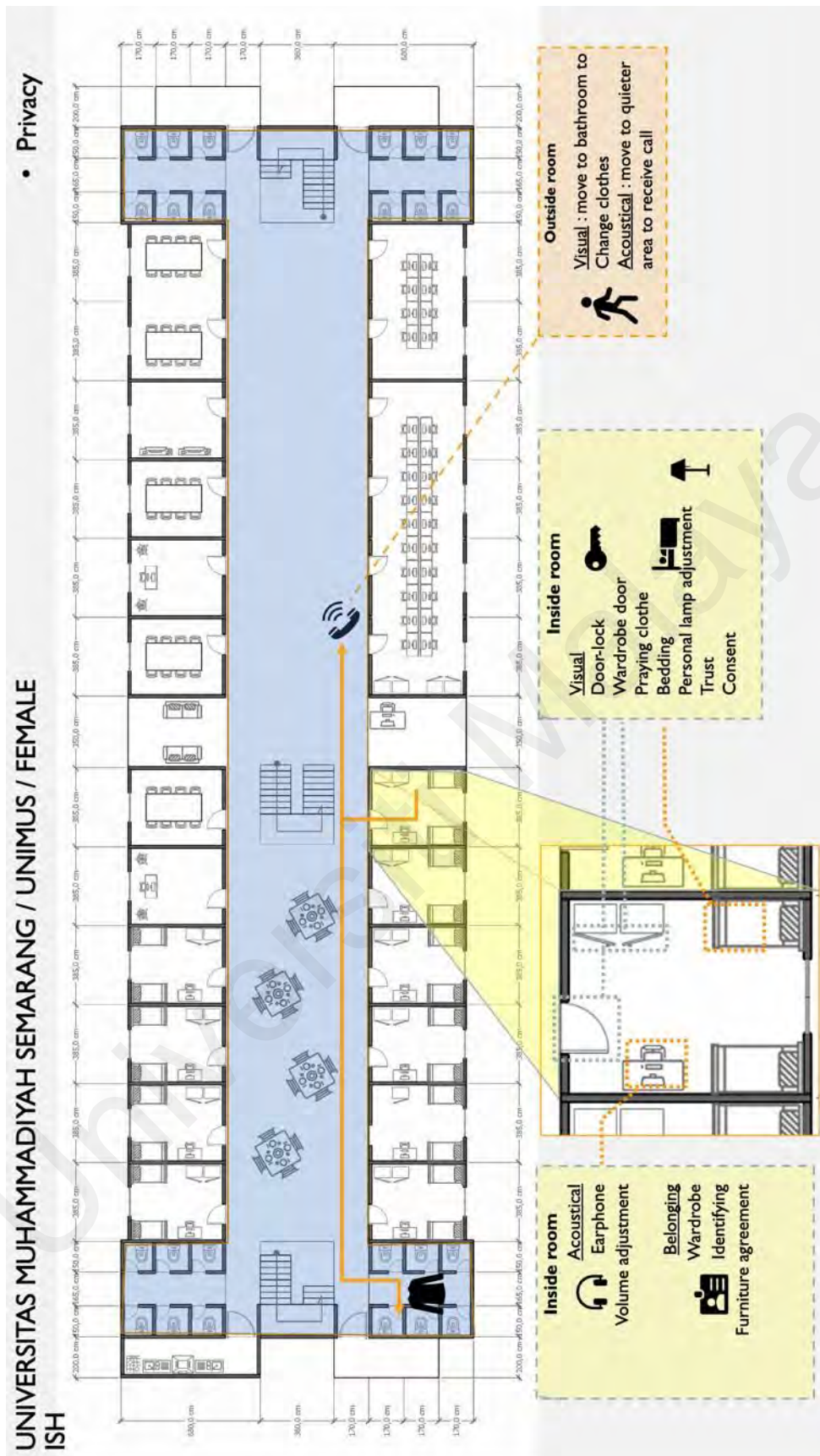
Figure 5.51 Visualization of privacy practices among female participants ISH UNIMUS

Visual Privacy in Female ISH UNIMUS

The visual privacy practiced by female participants of ISH UNIMUS conducted inside and outside room. Visual privacy normally practiced to make a secure feeling when participants changing clothes. Besides that, visual privacy also considered as a condition that participants want to concealed and unseen while doing an activity, such as sleeping. In order to establish the visual privacy when participants changing clothes, some treatments were conducted.

a. Provided ISH Properties : Outside bathroom

Female ISH UNISSULA buildings have multiple bathrooms to accommodate their dwellers. Each floor has two bathroom areas, each with toilets and showers. Each floor has twenty-four restrooms, which is sufficient to meet the students' needs for taking showers, using the toilet, and changing clothing. However, students tend to change their clothes in their rooms because it is more convenient. In order to guarantee visual privacy within the room, provided door and window curtain are sufficiently maintain their visual privacy.

Figure 5.52 Installed curtain on window
of female ISH UNIMUS

b. Self-properties : praying clothes

To simplify and expedite the process of changing clothing, the participants decided to do so solely within the room. To maintain their privacy, however, participants used prayer clothes, such as sarongs, when changing clothes to visually conceal their body parts.

c. Arrangements : furniture and space

The duality of the closet is the latest finding in the area of privacy. It is possible to increase the level of visible privacy while changing clothing in the room through the use of specific methods, such as the wardrobe door. Covering the body with bedding, such as a blanket, while sleeping to prevent roommates from observing the body is another privacy strategy in this situation. In addition to providing privacy for roommates in need, students' living arrangements also encourage them to consider their roommates' privacy.

Even though the participants generally feel at ease and at home when living at ISH UNIMUS, they have visual privacy preferences that they would like to have that are not now available at ISH UNIMUS. For example, the participants sought the installation of a bed curtain to disguise their bodies while sleeping and a fitting room curtain to conceal their bodies when changing clothes. Due to the varied resting and activity schedules of their roommates, participants also prefer a private lamp for studying and sleeping. The study about the visual privacy of female ISH UNIMUS also reveals that the windows do not provide visual privacy. Even though solid shades have been installed on the exterior window, the window and building location are easily visible from the exterior of the

building. Consequently, the window should features a blurred glass to hinder visual privacy while allowing sunlight to pass through.

Figure 5.53 Current condition of female ISH UNIMUS for privacy practices

Acoustical Privacy in Female ISH UNISSULA

The acoustical privacy practiced by female participants of ISH UNIMUS conducted inside and outside room. Visual privacy normally practiced making a secure feeling when participants making phone call or having online meeting. In order to establish the acoustical privacy when participants in a private call or online meeting, some treatments were conducted.

- Leaving the bedroom

To ensure their acoustical privacy, participants must leave their rooms and answer their phones in other areas of the student housing, such as the corridor that is nearest to their bedroom or find quiet area. This option permits students to preserve their acoustic privacy. The female ISH UNISSULA has multiple locations besides bedrooms to accommodate students with acoustic privacy requirements, such as corridor, hall, and lobby. Fortunately, those places equipped with seating groups for students to utilise while taking calls or participating in online conferences.

Figure 5.54 Chairs on the corridor (left), seating groups on the hall (right)

- Stay in bedroom

    Using earphones in the bedroom allows one to continue a phone or online meeting conversation without fear of being overheard, so achieving the desired level of acoustical privacy. In addition, a female participant claimed that she will adjust the sound level while talking to phone to limit the transfer voice and prevent roommates from overhearing.

The following figure depicts the current state of female bedrooms in the ISH UNIMUS based on the acoustical privacy preferences of the participants.
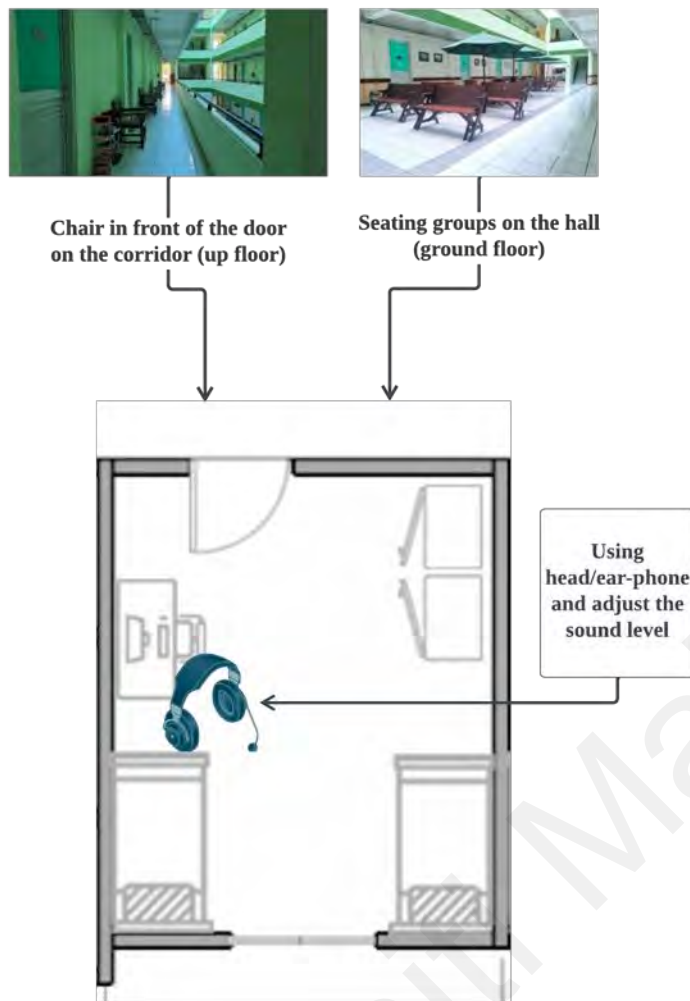
Figure 5.55 Places of acoustical privacy in female ISH UNIMUS

`

Belongings Privacy in Female ISH UNIMUS

The belongings privacy is typically observed to provide a sense of security when participants store their personal belongings or share and trust their personal items with housemates. To establish the privacy of female participants' items at ISH UNIMUS, a list of procedures were performed.

- Distribution of space

Female participants of ISH UNISSULA were provided with personal amenities such as a bed, wardrobe, and chair. Thus, the personal amenities become the individual's personal space, which they are encouraged to maximise. This personal space

becomes an unwritten and unspoken agreement for occupants to use their own personal amenities and not interfere with the rights of other occupants in terms of utilising their own. Additionally, if they use the personal amenities of other occupants, express permission must be obtained.

Even though the amenities given by ISH UNIMUS are rather comprehensive, some important items such as a wardrobe lock, a personal door lock, separate lighting, and a power outlet were missing. These little but necessary items should be supplied to increase the comfort and security of the residents. A participant also demand for a private furniture, such as desk, since the provided desk is a shared desk.

A.   Sociability

The sociability practices among female participants of ISH UNIMUS practised in joint activities, rules establishment, agreements, and the existence of sociability spaces. Furthermore, the following table and figure is the recap and visualization of the sociability practices among male participants of ISH UNISSULA.

Table 5.11 Recap of sociability establishment of female participants of ISH UNIMUS

Sociability in Male ISH UNISSULA		
Joint activities	Rules & agreements	Sociability spaces

- Praying
- Cooking
- Extra-curricular
	Rules :
	  - Spoken
	  - Unspoken
	Agreements :
	  - Utilities
	  - Furniture
		- Corridor
		- Hall
		- Bedroom

Figure 5.56 Visualization of sociability practices among female participants ISH UNIMUS

- Joint activities

Despite the intensive lecture schedule, the female participants of ISH UNIMUS made time for collaborative activities with their roommates and housemates. These activities are typically conducted both inside and outside of the bedroom. The participants' bedroom activities, such as watching films on a laptop, swapping stories and laughing. Aside from that, there are additional activities that can strengthen their social bonds, such as securing the things of their housemates.

In addition, cooking dining is the activity that participants engage in to strengthen their social connections. Thus, mealtime is one of the most anticipated times for students because they can eat with their mates. ISH UNIMUS's extracurricular activities consist of other joint activities performed outside the bedroom. The institution offers an archery programme that is often performed in the female ISH UNISSULA parking lot. The participants' participation in extracurricular activities will undoubtedly deepen their friendships among roommates and housemates.

Figure 5.57 Eating (left) and outdoor fun games (right) as the joint activities among female occupants of ISH UNIMUS

- Sociability spaces

The practises of sociability occurred not just among roommates and housemates, but also when receiving guests from the outside. The ISH UNIMUS offers social areas, which include a lobby and hall on the ground floor. The lobby is available for receiving guests and family members. In the meanwhile, the hall can be used to have meetings with housemates or student guests or to held a students, lecture, and religious activities. Additionally, female participants of ISH UNIMUS also receive close female guests in the front door corridor and inside the bedroom.
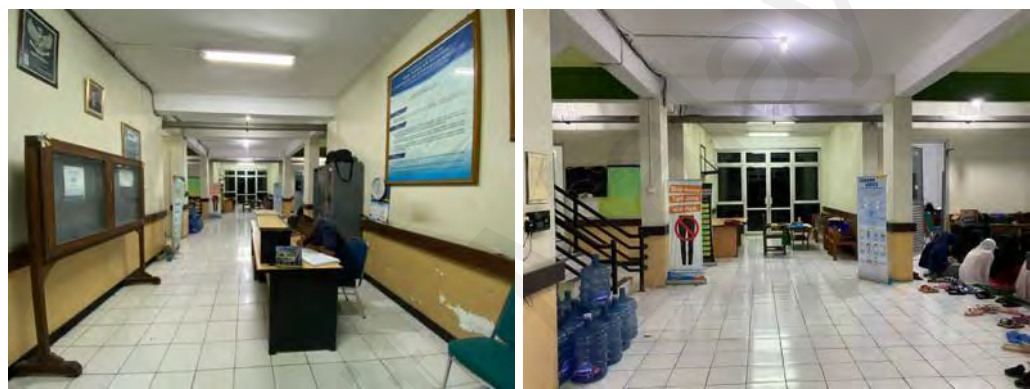
Figure 5.59 Front lobby with security desk (left) and main lobby (right) in ISH UNIMUS

Figure 5.58 Hall with seating groups (left) and hall utilised as religious activity (right) as sociability places in female ISH UNIMUS

The female ISH UNISSULA has accommodate the sociability practices completely. The hall is suitable for big-scale female student discussions and the lobby performed a dual purpose, receiving guests and discussion room. The following is the visualization of sociability spaces based on the guests status to the occupants.

B. Orientation

The FGD results from the analysis of female ISH UNIMUS indicate a correlation between building orientation preference and visual privacy. The following table is the recap of FGD findings about orientation preferences of female participants ISH UNIMUS.

Table 5.12 Recap of building orientation preferences of female participants ISH UNISSULA

Orientation preferences			
Privacy	Qibla	Solar movement	View
- Invisible from outside building	- Direction to the Qibla	- Natural lighting	Scenery

A participant in the FGD indicated that the window may compromise the visual privacy of their room, which is plainly visible from the exterior of the building. Therefore, the design of the window should fulfil its function as a ventilation without compromising the user's privacy. Specifically for female ISH, the secondary skin or another model such as *mashrabiya*, an external window device that reduces glare while allowing air intake and ensuring privacy, should be utilised. The ISH UNIMUS windows were designed with half

Figure 5.60 Window design (left) and the blinds revealing inside the room from outside the building (right)

glass and half blinds. Unfortunately, the blinds on the upper floor are visible from the exterior of the building, endangering the visual privacy of female building occupants.

In addition, participants chose view as their preferred building orientation. As an alternative orientation option, students choose to face their buildings towards the direction of Qibla. The participant argues that a building's orientation toward the Qibla facilitates the arrangement of room layout and space for prayer. Furthermore, the downtown regions of female ISH UNIMUS experience higher temperatures than the rest of the city. The female occupants of ISH UNIMUS who participated in the UNIMUS study concluded that sun movement was one of the building orientation characteristics they discovered.

Figure 5.61 Visualization of building orientation preferences for female participants ISH UNIMUS

5.2.3. Findings of Universitas Wahid Hasyim (UNWAHAS)

Male participants of Islamic Student Housing (ISH) UNWAHAS had a different "Atlas.ti" outcome than female participants in terms of links to three aspects: privacy, sociability, and orientation, as indicated by FGD data described in the preceding chapter. In terms of linkage codes, the ISH UNWAHAS results for male and female participants are distinct. The FGD data of male participants revealed a relationship between privacy and sociability linked by the rules they have constructed. While the orientation aspect is distinct and unrelated to the two preceding aspects. On the other hand, female participants of ISH UNWAHAS reported a substantial association between the three aspects of privacy, sociability, and orientation. As the male participants, the rules and agreements the have constructed connect privacy and sociability aspects. While building orientation preferences from female participants of ISH UNWAHAS is closely related to the privacy due to the outside visibility awareness. This FGD data will be thoroughly analysed and cross-referenced with secondary data such as floor plans and photographs.

The FGD findings in UNIMUS shows that privacy has correlation with sociability in several ways, such as self-consideration and consent. Even the finding from female participants shows that privacy, sociability, and orientation correlated each other. The findings of both the FGD and the secondary data acquired from the research sites will be compared and contrasted in this sub-chapter. The cross analysis will most likely also disclose conditions that have not been discussed regarding the male ISH buildings that were built by UNIMUS and the female ISH buildings that were built by The Ministry of Public Works and Housings (MPWH).

5.2.3.1.   Male Participants FGD Findings of ISH UNWAHAS

Privacy

The FGD held with male participants indicates the operation of privacy establishment among male students of ISH UNWAHAS which connected to the establishment of sociability. The connection between privacy and sociability is interesting because intangible aspect, self-consideration, bridging the privacy and sociability. Furthermore, mechanism of privacy was found to be more vibrant with three prominent establishing aspects; visual, acoustical, and belongings. Analysis also finds students' desired privacy for their better staying experience in student housing. The following picture shows the FGD from male participants of ISH UNWAHAS.
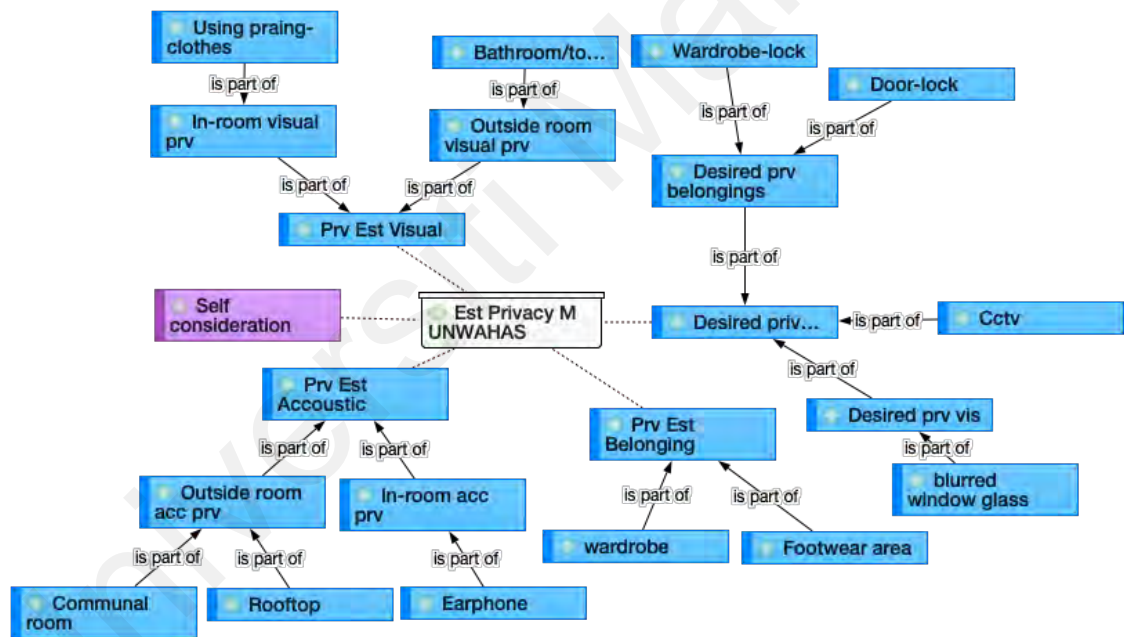
Figure 5.62 The establishment of privacy among male participants ISH UNWAHAS

The total number of occupants in male ISH UNIMUS is less than male occupants of ISH UNISSULA. However, the mechanism of privacy was found to be more vibrant with three prominent establishing aspects; visual, acoustical, and belongings. Analysis of FGD with male participants of ISH UNIMUS shows that visual and acoustical privacy

established either inside or outside the bedroom. In the establishment of visual privacy, students use toilet as their changing room. However, they also will rather choose to change the clothes inside their multi-user bedroom by utilizing praying clothes, self-made curtain from hanging towel, or just simply ask their roommate in case need visual privacy. Furthermore, acoustical privacy inside the bedroom can be achieved using earphone to remain the call activity without getting overheard. The usage of earphone is also part of their consideration to avoid disturbance for their roommates. The other option to achieve their acoustical privacy by leaving the room and receive the phone call in certain places, such as corridor, balcony, or prayer room next to the building. Staying in a multi-user bedroom makes students adapt with their belongings privacy which allows them to know how to secure or even share their belongings. Locked wardrobe is their reliable furniture to secure their belongings. Additionally, identification or naming the belongings placed out of wardrobe is also their mechanism for belongings privacy. The experience of living in the student housing taught students to manage their spatiality for mutual convenience. Thus, they implemented the space arrangement to secure their belongings, so can provide spacious space for other room users. The most surprising aspect of the data finding is in the intangible aspects that create privacy. Written rules, spoken consent, or even the unspoken consent generate self-consideration in respecting roommates' privacy.

Nevertheless, students demanding some privacy aspects for their suitability and boost their experience during stay in student housing. As multi-user bedroom they desire separator or curtain to maintain their visual privacy while in the bedroom and tinted or one-way vision glass to generate their visual privacy from outsiders. Another desired privacy is that students desire personal lamp and power socket around their bedframe to avoid scrambling electricity usage. For acoustical privacy, soundproof room is also something they desired to prevent from eavesdrop, external noise, and disturbing

vibration from above floor. The next section of the data collection was concerned with sociability mechanism among male students in male ISH UNIMUS.

Sociability

The next aspect observed to the participants is how the perform the sociability between roommates, housemates, and guests. Figure below demonstrates some of the main characteristics of the sociability mechanism among male students in the male ISH UNIMUS.

Figure 5.63 The establishment of sociability on UNIMUS male student housing

The result of the correlation analysis between sociability and privacy are shown in purple and blue codes; spoken consent and space agreements. The correlation between privacy and sociability mechanism is interesting because connected by intangible aspects. The sociability mechanism among the male students in PONPES Tahfidz reported that

the intangible aspects has the majority in the implementation. Six joint activities are reportedly done by occupants that believed boost their social connectedness and creates sociability among occupants. Some fun activities such as playing game, watching film, singing, cooking, share the stories and laughter are seemingly establish their togetherness. PONPES Tahfidz as Islamic student housing is inexorably full-filling students with Islamic activities. Thus, reminding each other to perform the faith activity is remarkably found as intangible things to create sociability among students. Furthermore, rules and agreements as intangible aspects in sociability were implemented by students. Spoken and unspoken rules practiced appropriately by students' group or institution as discipline training and amazingly practices connect students to get closer. Eventually, the existence of guest spaces as the tangible aspect of sociability comprises as the facility to receive guests. The guest spaces is a standard design to welcome guests and utilized by students for their private and communal activities.

Orientation

The findings of the FGD analysis with regard to the values of orientation as students occupant are displayed up there in Figure 5.36 below.

Figure 5.64 The desired orientation on UNIMUS male student housing

The desired building orientation in the current findings are quite similar to findings in male student housing UNISSULA. The inquiries about building orientation discovered that the participants were unanimous in the view that their desired building orientations aspects are determined by view, wind, solar movement, and cultural thing. PONPES Tahfidz is located in the dense neighborhood of Semarang. Hence, first finding regarding orientation is that participants choose view as their prominent desired view steadily. Participants anticipate view as their desired building orientation such as facing the greeneries or clean environment. Secondly, wind was the choice of students for their building orientation. They reasoned that windy direction controls their bedroom comfort. Thirdly, solar movement is the third findings in building orientation aspects determined by students of UNIMUS staying in PONPES Tahfidz. Furthermore, participants' answers divided by two options, reluctant and preferably to sunlight. Participants who had preference to sunlight were choosing sunrise to their natral lighting. In the other hand those who reluctant to solar movement reasoned to bedroom thermal comfort. Lastly, an

254

interesting finding of participant is the cultural thing, that he was unwilling to *tusuk sate* or building facing T-junction.

5.2.3.2. Female Participants FGD Findings of ISH UNWAHAS

This section will explain about the analysis from FGD data with female participants of Female Islamic Student Housing (ISH) Universitas Muhammadiyah Semarang (UNIMUS). Excitingly, the three aspects of spatiality in female participants have connected each other. Thus, the explanation of three aspects; privacy, sociability, and orientation will be explained separately due to the complexity and linking to each other aspects.

Privacy

The establishment of privacy among female occupants of female ISH UNIMUS shows rather comprehensive rather than female UNISSULA student housing. Nevertheless, privacy aspect findings have implication to other aspects, sociability, and orientation. The figure below shows the findings from FGD with female participants of ISH UNIMUS regarding privacy establishment.

Figure 5.65 The establishment of privacy on UNIMUS female student housing

The establishment of visual privacy on female PONPES UNIMUS consist of simple outside-room privacy, and more complex in-room visual privacy. Outside-room privacy also has the implication to their desired orientation to prevent from outsiders' unlawful sight. The inquiries to participants prove that they will maintain their visual privacy by changing clothes in the bathroom. Furthermore, in-room visual privacy discovered interesting findings with an implication to sociability aspect. In-room visual privacy argues that trust between roommates that generates from spoken consent and self-consideration creates a solid visual privacy. Wardrobe play significant role in the establishment of visual privacy in multi-user bedroom and has double aspect functions. With certain arrangement, such as utilize the wardrobe door, can increase the visual privacy level while changing clothes inside the room. Another surprising finding is the usage of praying clothes / praying robe to ease the changing clothes activity without leaving the bedroom but remain the visual privacy. Bedding such as blanket can also a tool to maintain their visual privacy during staying in the bedroom. However, the

256

existence of door is still considered as the most basic building element for privacy and determine the privacy, security, and spatiality.

In acoustical privacy, female students of UNIMUS resided in female PONPES tend to implement it in simple way. The acoustical privacy they were need mostly during phone call or online meeting. To achieve the acoustical privacy inside the room, they just simply using earphone during phone call or online meeting. They will also adjust the volume for their own privacy and other occupants' convenience. Residing in student housing for more than two consecutive years provide them an experience in self-consideration and respecting other's privacy. Additionally, students will also having their phone call or achieve their acoustical privacy by leaving the room and receive it on the corridor, balcony, or any quiet area.

Whereas, the mechanism of belongings privacy by participants was much simple but has an implication to sociability aspects. Well established sociability among multi-bedroom users emerges a secure feel for students to store their belongings inside the bedroom. Spoken consent to their roommates and implemented self-consideration from unspoken consent that manifested by social connectedness create an intangible security element. Hence, there was a significant positive correlation between sociability and belongings privacy among female students in UNIMUS female student housing. The wardrobe was also their prominent tangible element to secure their belongings. Additionally, identification or naming the belongings placed out of wardrobe is also their mechanism for belongings privacy. The experience of living in the student housing taught students to manage their spatiality for mutual convenience. FGD analysis finds participants' desired privacy in their student housing. encompass building material, furniture, utilities, and spatial arrangement. Soundproof building material is something that desired to prevent from eavesdrop, external noise. Personal study desk with lamp are

also their desired aspect to avoid scrambling furniture and electricity usage. Lastly, dedicated fitting room inside the room was the desired privacy for their room to maintain their visual privacy.

Sociability

Figure 5.66 The establishment of sociability on UNIMUS female student housing

The hall of female PONDOK UNIMUS building is considerably a significant space for sociability practices. Some activities such as extra-curricular, praying, and receiving guests can be done in the hall. Naturally, bedroom also provides sociability to enhance their social-connectedness with roommates and also can be a place to receiving close guests. Furthermore, rules and agreements as intangible aspects in sociability were applied by students. Spoken, unspoken, written, and unwritten rules practiced accordingly by students' circle or institution for the sake of discipline training and surprisingly those connect students to be more intimate.

Orientation

Figure 5.67 The desired orientation on UNIMUS female student housing

The results of the FGD analysis regarding orientation as locality values are obtainable in the Figure 5.39 above. The desired building orientation in analysis found Qibla as a significant aspect. Another findings of the enquiry are view, solar movement, and privacy. Female PONPES UNIMUS building is situated inside the area of campus and surrounded by other university buildings. Hence, the finding regarding orientation is that participants indicate view as their desired view. In addition, solar movement is the third findings in building orientation aspects determined by students of UNIMUS staying in PONPES. They were desire sunrise and natural lighting from the solar movement aspect. Furthermore, finding in orientation enquiry of participant is the privacy to avoid the window direction towards public area.

5.2.3.3. Male Participants Cross Analysis Findings of UNWAHAS

A FGD done with male participants of ISH UNWAHAS students revealed that visual and audio privacy can be established either inside or outside the bedroom. While privacy of personal belongings is developed between roommates and established

exclusively within the room itself. However, male students desired some privacy-related components for their own convenience.

A. Privacy

The male participants of ISH UNWAHAS established visual, acoustical, and personal property privacy practises. The privacy practises of male participants of ISH UNWAHAS were more simple than those of male members of ISH UNISSULA or UNIMUS. The population density of male ISH UNWAHAS is comparable to that of the previous two male ISHs. Its practises were depicted in the figure and table below, which provide a summary of findings about the establishment of privacy among male ISH UNWAHAS participants.

- Privacy

Figure 5.68 Visualization of privacy practices among male participants ISH UNWAHAS

261

Privacy		
Visual	Acoustical	Belongings
In-room : - Using praying clothes	In-room : - Earphone	In-room : - Wardrobe - Shoes cabinet
Outside : - bathroom	Outside : - Communal room - Rooftop	
Desired : - Layered window-glass	Desired :	Desired : - CCTV - Wardrobe lock - Door lock

Visual Privacy in Male ISH UNIMUS

The visual privacy practiced by male participants of ISH UNIMUS conducted inside and outside room. Visual privacy normally practiced to make a secure feeling when participants changing clothes. In order to establish the visual privacy when participants changing clothes, some treatments were conducted.

- Provided ISH Properties : Outside bathroom

Male ISH UNIMUS buildings have multiple bathrooms to accommodate their dwellers. Unfortunately, the total toilets that male ISH UNWAHAS has are not that much to accommodate the occupants need when in the rush hour such as in the morning. Hence, occupants should queueing to use the bathroom for their cleanliness need or changing the clothes. However, students tend to change their clothes in their rooms because it is more convenient. In order to guarantee visual privacy within the room, participants claimed that prayer clothes is required, as explained in the following section.

- Self-properties : praying clothes

To simplify and expedite the process of changing clothing, the participants decided to do so solely within the room. To maintain their privacy, however, participants used prayer clothes, such as sarongs, when changing clothes to visually conceal their body parts.

Even though the participants generally feel at ease and at home when living at ISH UNWAHAS, they have visual privacy preferences that they would like to have that are not now available at ISH UNWAHAS. For instance, participants also expecting a layered window glass, such as sand-blast layered sticker on the glass to conceal visually from outside the ISH UNWAHAS building. The following figure depicts the current state of male bedrooms in the ISH UNWAHAS based on the privacy behaviours and preferences of the participants. The figure 5.69 shows how they built the visual privacy by sticking some papers on the window, and the following figure 5.70 also the practices of visual privacy by applying curtain from fabric bedsheet to block the visibility from outside the building.

Figure 5.69 Current condition of male ISH UNWAHAS for visual privacy practices

Acoustical Privacy in Male ISH UNISSULA

The acoustical privacy practiced by male participants of ISH UNIMUS conducted inside and outside room. Visual privacy normally practiced to make a secure feeling when participants making phone call or having online meeting. In order to establish the acoustical privacy when participants in a private call or online meeting, some treatments were conducted.

- Leaving the bedroom

  To ensure their acoustical privacy, participants must leave their rooms and answer their phones in other areas of the student housing complex, communal room and rooftop. The observation from the research, the corridor front door of bedroom also can be used as the place to receive call privately. Those options allows students to preserve their acoustical privacy.

- Stay in bedroom

  Using headphones in the bedroom allows one to continue a phone conversation without fear of being overheard, so achieving the desired level of acoustic privacy.

The following figure depicts the current state of male bedrooms in the ISH UNISSULA based on the acoustical privacy preferences of the participants.

Figure 5.70 Communal space on the ground floor (left) and corridor (right) as places to achieve acoustical privacy

Figure 5.71 Rooftop

Belongings Privacy in Male ISH UNISSULA

Only within the bedroom did male participants of ISH UNIMUS practise privacy regarding their belongings. This type of privacy is typically observed to provide a sense of security when participants store their personal belongings or share and trust their personal items with housemates. To establish the privacy of participants' items at ISH UNISSULA, a list of procedures were performed.

- Distribution of space

  Every student occupant of ISH UNISSULA was provided with personal amenities such as a matrass, wardrobe, and shoe racks. Thus, the personal amenities become the individual's personal space, which they are encouraged to maximise. The male participants of ISH UNWAHAS stated that they practiced the belongings privacy by making agreement in distributing the wardrobe and shoes rack. This personal space becomes an unwritten agreement for occupants to use their own personal amenities and not interfere with the rights of other occupants in terms of utilising their own.

Even though the amenities given by ISH UNWAHAS are rather comprehensive, some important items such as a wardrobe lock, a personal door lock, and CCTV. These little but necessary items should be supplied to increase the comfort and security of the residents.
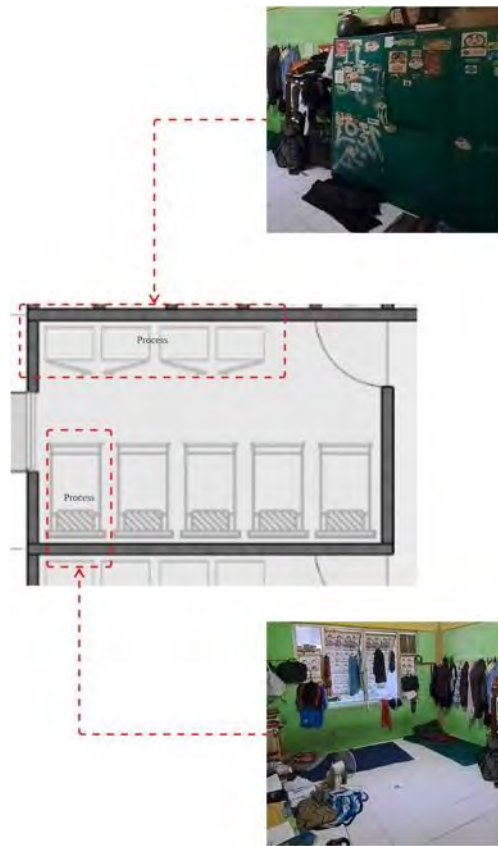
Figure 5.72 Practices of distribution space and zoning in male ISH UNWAHAS

A. Sociability

The sociability practices among male participants of ISH UNWAHAS practised in joint activities, rules establishment, agreements, and the existence of sociability spaces. Its practices visualized in the following figure and table about recap of findings regarding privacy establishment among male participants of ISH UNIMUS. Sociability practises and the establishment of privacy are intrinsically linked, as the two are interdependent. Therefore, sociability is the manifestation of respect for and maintenance of roommates' privacy. Furthermore, the following table and figure is the recap and visualization of the sociability practices among male participants of ISH UNIMUS.

Table 5.14 Recap of sociability establishment of male participants of ISH UNWAHAS

Sociability in Male ISH UNWAHAS		
Joint activities	Rules & agreements	Sociability spaces

- Sharing
- Security
- Cleaning
	Rules :
	  - Spoken
	  - Unspoken
	Agreements :
	  - Utility fee
	  - Furnitures
	  - utilities
		- Hall
		- Guest bedroom

Figure 5.73 Visualization of sociability practices among male participants ISH UNIMUS

- Joint activities

Despite the demanding teaching schedule, the participants engaged in joint activities with their roommates and housemates. These actions are typically conducted both inside and outside of the bedroom. The members' bedroom activities, such as sharing stories during their day at the campus or another experiences. In addition, there are other activities that might build their social bonds, such as protecting their housemates' belongings. Therefore, the activities of security tighten the element of belongings' sociability and privacy. Additionally, cleaning is the practise of setting norms, which indirectly develops relationships and disciplines participants' cleanliness habits. The housemates' commitment to maintaining the cleanliness of their ISH is represented by the cleaning rules. As occupants in Islamic student housing, male participants of ISH UNWAHAS should also engage in religious activities such as congregational prayer, Quran recitation, and communal dining. These shared activities are unquestionably enhancing the residents' socialisation practises.
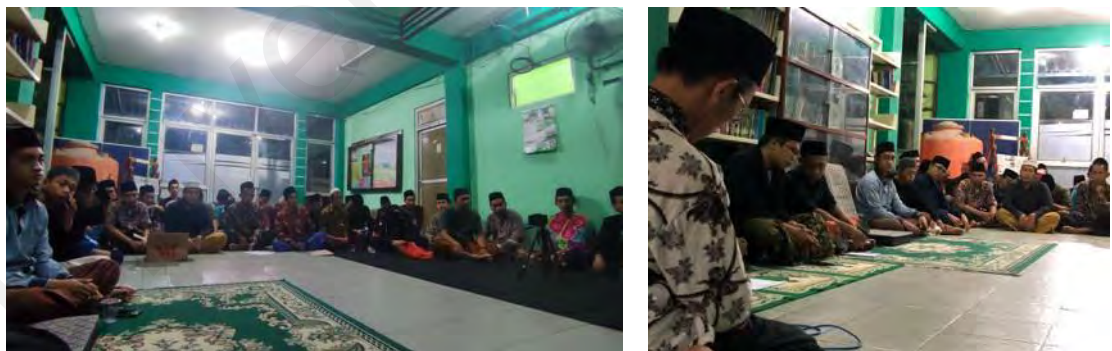
Figure 5.74 Religious activities performed by male occupants of ISH UNWAHAS
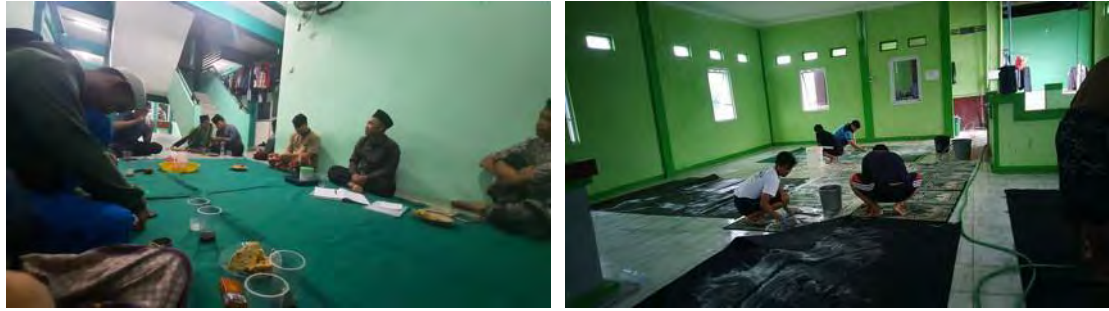
Figure 5.75 Eating and cleaning as jint activities in ISH UNWAHAS

- Sociability spaces

  Social practises occurred not only among roommates and housemates, but also when receiving outside guests. The ISH UNWAHAS provides social areas such as a communal space and guest bedroom. The communal space may accommodate official religious gatherings, meeting, and congregational pray. In the meanwhile, the communal space will also host male guests, official guests, discussion, and family visit. Additionally, the male ISH UNWAHAS offers a guest bedroom for overnight guests. The sociability spaces located on the ground floor which considerably neat and spacious since the students' bedroom are located on the up floors.

With the provision of the aforementioned guest areas, the male ISH UNWAHAS building accommodates sociability practises effectively. Male ISH UNWAHAS students will learn through the sociability practises how to respect guests without compromising their privacy.

Figure 5.76 Sociability spaces for joint activities in male ISH UNWAHAS

B. Orientation

The campus of UNWAHAS is situated inside the area of urban settlement and the ISH UNWAHAS surrounded by housings. Hence, the finding regarding orientation is that participants indicate view as their desired view. In addition, solar movement is the other findings in building orientation aspects determined by male participants of UNWAHAS staying in ISH which they were desire thermal comfort of their bedroom. Additionally, regarding the thermal comfort, participants also considering wind for their building orientation. Furthermore, participants also choose Qibla as their building orientation as part of the Islamic culture.

Table 5.15 Recap of building orientation preferences of male participants ISH UNWAHAS

Orientation preferences			
View	Wind	Qibla	Solar Movement
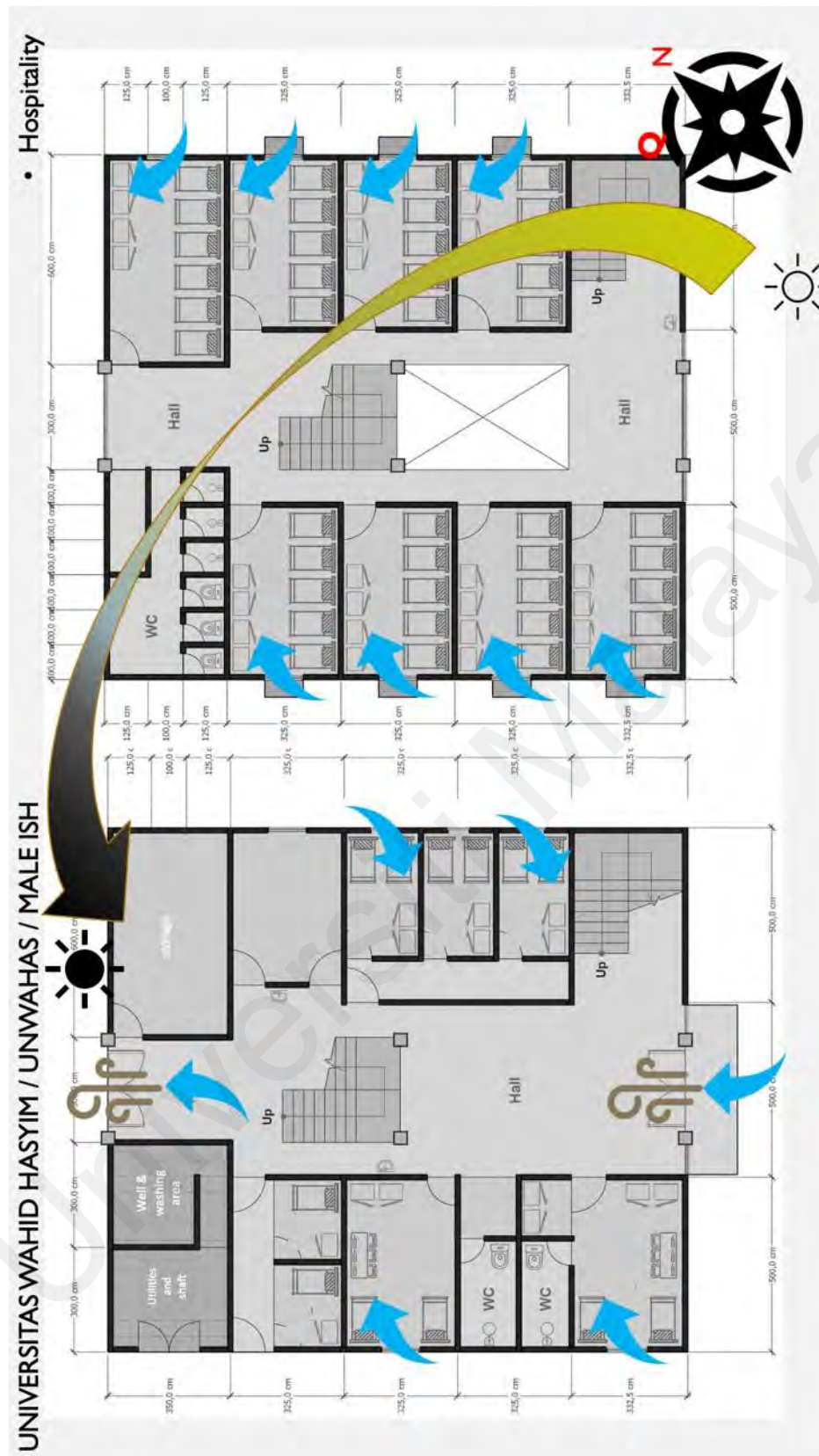
Figure 5.77 Visualization of building orientation preferences for male participants ISH UNWAHAS

5.2.3.4. Female Participants Cross Analysis Findings of UNWAHAS

A FGD done with female participants of ISH UNWAHAS, and revealed that three aspects of privacy, sociability, and orientation, are correlated each other and establish a dwelling value of Islamic architecture in ISH. The agreements that participants practices among roommates connecting privacy and sociability aspects. In addition, privacy also tight knot to the building orientation preferences where they feel outside building affecting their visual privacy in the bedroom.

A. Privacy

The privacy practices among female participants of ISH UNWAHAS established in visual, acoustical, and belongings. Its practices visualized in the following figure and table about recap of findings regarding privacy establishment among female participants of ISH UNWAHAS.

Table 5.16 Recap of privacy establishment of female participants of ISH UNIMUS

Privacy in Female ISH UNIMUS		
Visual	Acoustical	Belongings
In-room : - Speaker warning - Space agreement - Spoken consent	In-room : - Earphone - Space arrangement	In-room : - Trust - Lamp adjustment - Territory - Door & wardrobe lock - Wardrobe - Rules agreement
Outside : - Bathroom	Outside : - Corridor/ balcony - Staircase	
Desired : - Curtain	Desired : Soundproof	Desired : - CCTV - Bunkbed
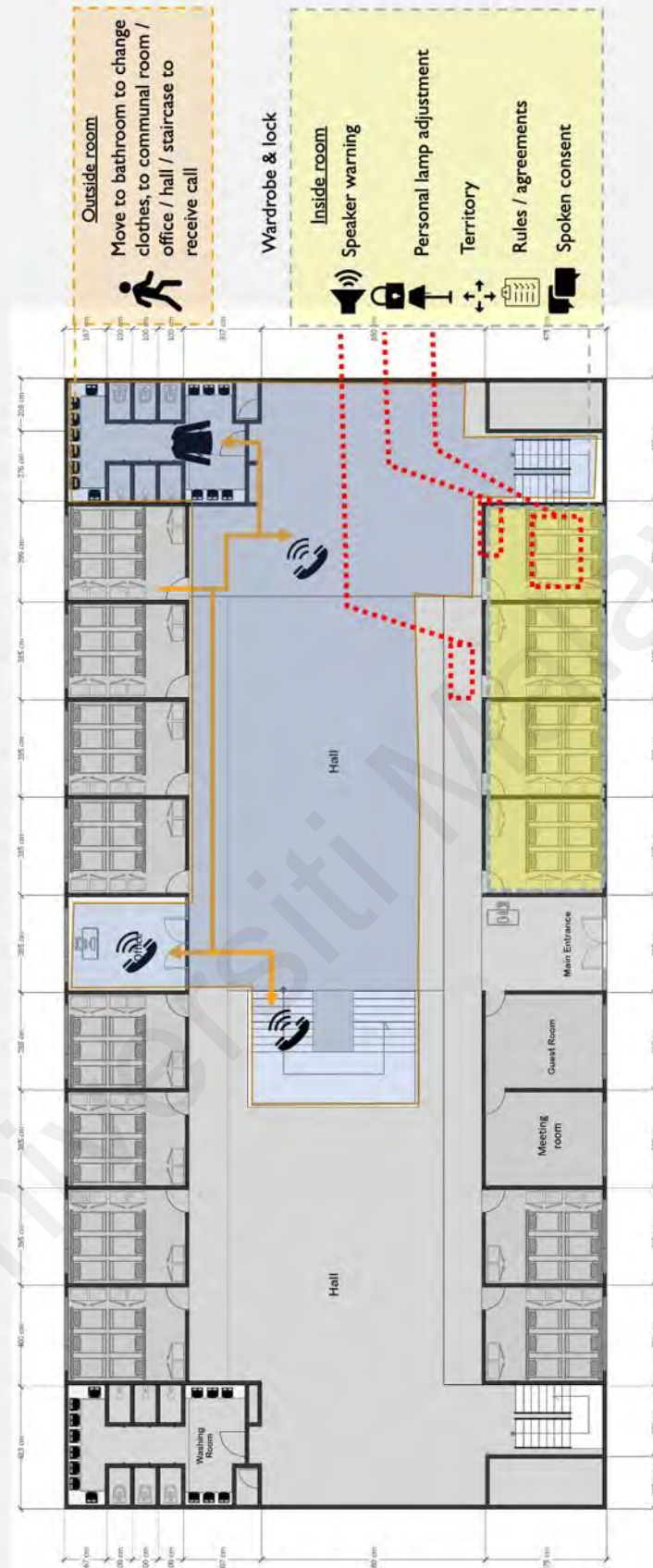
Figure 5.78 Visualization of privacy practices among female participants ISH UNWAHAS

Visual Privacy in Female ISH UNWAHAS

The visual privacy practiced by female participants of ISH UNWAHAS conducted inside and outside room. Visual privacy normally practiced to make a secure feeling when participants changing clothes. Besides that, visual privacy also considered as a condition that participants want to concealed and unseen while doing an activity, such as sleeping. In order to establish the visual privacy when participants changing clothes, some treatments were conducted.

a. Provided ISH Properties : Outside bathroom and speaker warning

Female ISH UNWAHAS buildings have multiple bathrooms to accommodate their dwellers. Each floor has two bathroom areas, each with toilets and showers. Each floor has twelve restrooms, which considerably insufficient to meet the students' needs for taking showers, using the toilet, and changing clothing. The visual privacy in the toilet is easily achieved due to the existence of curtain to block visibility to the toilet area. However, students tend to change their clothes in their rooms because it is more convenient. To guarantee visual privacy within the room, provided door and window curtain are sufficiently maintain their visual privacy. Additionally, female ISH UNWAHAS also installing a speaker to announce incoming guests to towards ISH, so students can prepare to cover up their body with decent covered clothes.
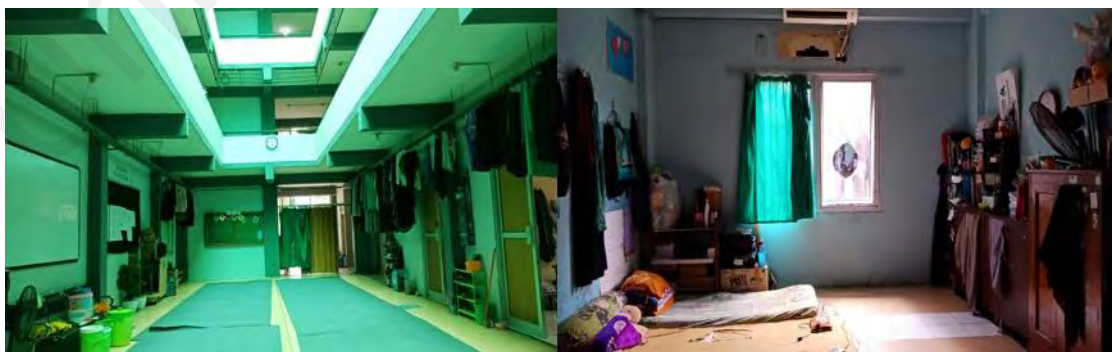
Figure 5.79 Installed curtain on toilet area (left) and on bedroom window (right) in female ISH UNWAHAS

b. Arrangements : furniture and space

The duality of the closet is the latest finding in the area of privacy. It is possible to increase the level of visible privacy while changing clothing in the room through the use of specific methods, such as move to the corner of the room. In addition to providing privacy for roommates in need, students' living arrangements also encourage them to consider their roommates' privacy.

Even though the participants generally feel at ease and at home when living at ISH UNWAHAS, they have visual privacy preferences that they would like to have that are not now available at ISH UNIMUS. For example, the participants sought the installation of a curtain as a fitting room to conceal their bodies when changing clothes. The study about the visual privacy of female ISH UNWAHAS also reveals that the windows do not provide visual privacy. Even though curtain and glass layer installed on window, the location of ISH that close to the road can reveal the person inside the bedroom. The occupants need to open the window and curtain to provide the wind breeze but the window hinge can be installed as tilt and turn window opening. Hence the privacy can be maintained while window remain opened.

Figure 5.80 The ISH located near the road and window
opening type can diminish the visual privacy

276
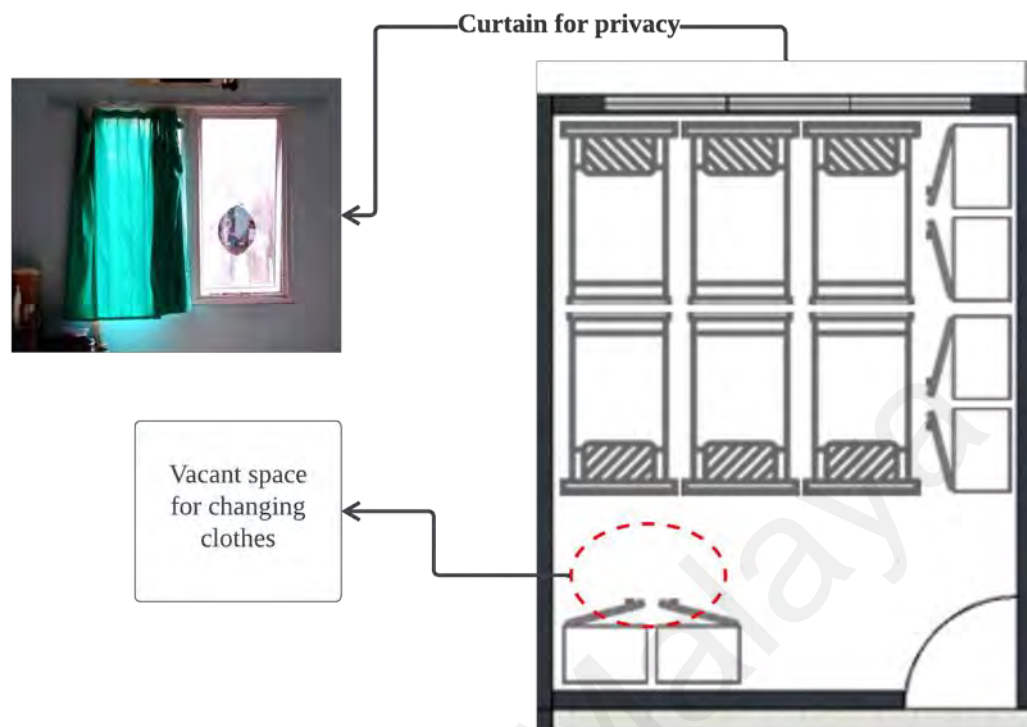
Figure 5.81 Current condition of female ISH UNWAHAS for privacy practices

Acoustical Privacy in Female ISH UNISSULA

The acoustical privacy practiced by female participants of ISH UNWAHAS conducted inside and outside room. Visual privacy normally practiced making a secure feeling when participants making phone call or having online meeting. In order to establish the acoustical privacy when participants in a private call or online meeting, some treatments were conducted.

- Leaving the bedroom

To ensure their acoustical privacy, participants must leave their rooms and answer their phones in other areas of the student housing, such as the corridor that is nearest to their bedroom or find quiet area. This option permits students to preserve their acoustic privacy. The female ISH UNISSULA has multiple locations besides bedrooms to accommodate students with acoustic privacy requirements, such as staircase. Unfortunately, those places are not supportive space to receive call or online meeting. The corridor is not equipped with sitting bench or chair to accommodate students while receiving the call.

Figure 5.82 Corridor condition in female ISH UNWAHAS

- Stay in bedroom

Using earphones in the bedroom allows one to continue a phone or online meeting conversation without fear of being overheard, so achieving the desired level of acoustical privacy.

Belongings Privacy in Female ISH UNIMUS

The belongings privacy is typically observed to provide a sense of security when participants store their personal belongings or share and trust their personal items with housemates. To establish the privacy of female participants' items at ISH UNIMUS, a list of procedures were performed.

- Distribution of space

Female participants of ISH UNWAHAS were provided with personal amenities such as a bed, wardrobe, desk, and chair. Thus, the personal amenities become the individual's personal space, which they are encouraged to maximise. This personal space becomes an unwritten and unspoken agreement for occupants to use their own personal amenities and not interfere with the rights of other occupants in terms of utilising their own. Additionally, if they use the personal amenities or territory of other occupants, express permission must be obtained. And these are the self-considerations and unspoken rule that residents of ISH UNWAHAS demonstrate in terms of storing and utilising their own amenities and borrowing their roommates' amenities.

- Zoning

Self-consideration practises motivate occupants to utilise their spaces for storage of their belongings. The participant mentioned that the spaces around the personal amenities also becoming the personal territory as part of occupants' agreement among roommates. Likewise, the area surrounding their bed and wardrobe become an integral component of their zone.

Even though the amenities given by ISH UNWAHAS are rather comprehensive, some important items such as a wardrobe lock, separate lighting, and a power outlet were missing. A participant also mentions the importance of separate lighting to avoid disagreements between individuals who require their lamps on or off while sleeping. In addition, the current sleeping amenities of female ISH UNWAHAS are mattresses, and one participant claimed that bunkbeds are required. The bunkbed kind expands their bedroom's available space while increasing their sleeping privacy. In ISH UNWAHAS, the absence of CCTV diminishes both privacy and security. Thus, CCTV has become a

desired privacy-related feature of their ISH. These small but necessary items should be provided to enhance the residents' comfort and safety.

A.   Sociability

The sociability practices among female participants of ISH UNWAHAS practised in joint activities, rules establishment, agreements, and the existence of sociability spaces. Furthermore, the following table and figure is the recap and visualization of the sociability practices among male participants of ISH UNWAHAS.

Figure 5.83 Distribution zoning and potential personal belongings in female ISH UNWAHAS

Sociability in Male ISH UNISSULA		
Joint activities	Rules & agreements	Sociability spaces

- Extracurricular
- Dining
- Cleaning
- Sharing
- Praying
	Agreements :
	    - Utilities
	    - Furniture
		- Office management
		- Hall
		- Terrace
		- Guest bedroom

Figure 5.84 Visualization of sociability practices among female participants ISH UNWAHAS

- Joint activities

Despite the intensive lecture schedule, the female participants of ISH UNWAHAS made time for collaborative activities with their roommates and housemates. These activities are typically conducted both inside and outside of the bedroom. The participants' bedroom activities, such as sharing the stories or experiences with roommates. In addition, dining is the activity that participants engage in to strengthen their social connections. Thus, mealtime is one of the most anticipated times for students because they can eat with their mates. ISH UNWAHAS's extracurricular activities consist of other joint activities performed inside or outside of ISH. The institution offers rebana (religious musical instrument) and speech performance. The participants' participation in extracurricular activities will undoubtedly deepen their friendships among roommates and housemates.

Figure 5.85 Dining (left) and extracurricular (right) as the joint activities among female occupants of ISH UNWAHAS

- Sociability spaces

    The practises of sociability occurred not just among roommates and housemates, but also when receiving guests from the outside. The ISH UNWAHAS offers social areas, which include a terrace, management office, foyer, hall, and guest bedroom on the ground floor. The terrace is utilized to receive male guests, while foyer is available for receiving guests and family members. In the meanwhile, the hall can be used to have meetings with housemates or student guests or to held a students, lecture, and religious activities.

Figure 5.86 Foyer (left) and hall (right) in ISH UNWAHAS

The female ISH UNISSULA has accommodate the sociability practices completely. The hall is suitable for big-scale female student discussions and the lobby performed a dual purpose, receiving guests and discussion room. Unfortunately those space not equipped with seating group for proper guest receiving.

B. Orientation

The FGD results from the analysis of female ISH UNWAHAS indicate a correlation between building orientation preference and visual privacy. The following table is the recap of FGD findings about orientation preferences of female participants ISH UNWAHAS.

283

Orientation preferences			
Privacy	Cultural	Solar movement	Wind
- Reluctant to facing the road	- Direction to the Qibla	- Reluctant : - Applying sticker - Preferably : - Towards sunrise	Breeze air

A participant in the FGD indicated that the window may compromise the visual privacy of their room, which is visible from the exterior of the building. Therefore, the design of the window should fulfil its function as a ventilation without compromising the user's privacy. Specifically for female ISH, the secondary skin or another model such as *mashrabiya*, an external window device that reduces glare while allowing air intake and ensuring privacy, should be utilised. The ISH UNWAHAS windows have previously placed a layer of sandblast glass to obstruct outside visibility. Due to the proximity of the ISH UNWAHAS building to the road, the opening window reveals a portion of the interior space. In addition, participants consider the building's orientation in terms of thermal and brightness comfort. The participants stated that their preferred building orientation is to maximise wind flow and solar movement in order to see the sunrise in the morning. Moreover, a participant indicated that culture is her preferred building orientation, with the culture oriented towards the south and north.

Figure 5.87 The opened windows potentially reveal the inside bedroom (left) the building close to the road (right)

Figure 5.88 Visualization of building orientation preferences for female participants ISH UNWAHAS

285

5.2.4. Findings of Universitas Islam Negeri Walisongo (UIN Walisongo)

UIN Walisongo is the only research location with entirely Islamic Student Housing (ISH) for women. Female participants of ISH UIN Walisongo has similar "Atlas.ti" outcome with other female participants of previous three ISHs in terms of ties to three aspects: privacy, sociability, and orientation, as evidenced by FGD data provided in the preceding chapter. The FGD data of female participants demonstrated a connection between privacy and sociability with the space and furniture arrangements they have created. While the building orientation aspect related with the privacy aspects by the existence of window that desire privacy from outside. This FGD data will be thoroughly analysed and cross-referenced with secondary data such as floor plans and photographs.

5.2.4.1. Female Participants FGD Findings of ISH UNWAHAS

This section will explain about the analysis from FGD data with female participants of Female ISH Walisongo. Excitingly, the three aspects of spatiality in female participants have connected each other. Thus, the explanation of three aspects; privacy, sociability, and orientation will be explained separately due to the complexity and linking to each other aspects.

Privacy

The establishment of privacy among female occupants of female ISH UIN Walisongo shows similar comprehensively with other three female Islamic student housings. Nevertheless, privacy aspect findings have implication to other aspects, sociability, and orientation. The figure below shows the findings from FGD with female participants of ISH UIN Walisongo regarding privacy establishment.
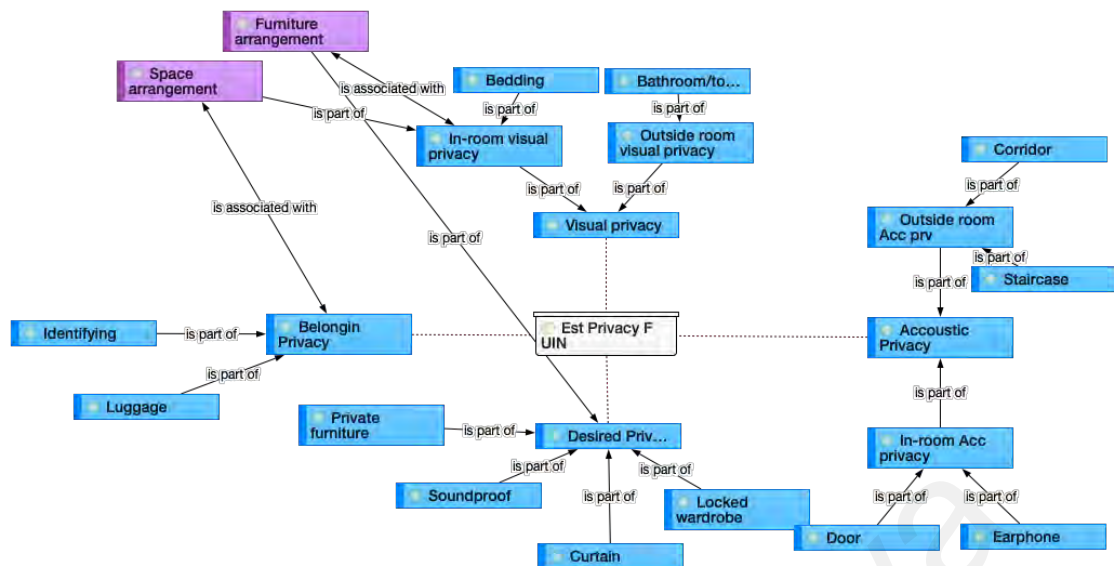
Figure 5.89 The establishment of privacy on UNWAHAS female student housing

The establishment of visual privacy on female ISH UIN Walisongo consist of simple outside-room privacy, and more complex in-room visual privacy. Outside-room privacy also has the implication to their desired orientation to prevent from outsiders' unlawful sight. The inquiries to participants prove that they will maintain their visual privacy by changing clothes in the bathroom. Furthermore, in-room visual privacy discovered interesting findings with an implication to wsociability aspect. In-room visual privacy argues that trust between roommates that generates from space arrangements. Wardrobe play significant role in the establishment of visual privacy in multi-user bedroom and has double aspect functions. With certain arrangement, such as utilize the wardrobe door, can increase the visual privacy level while changing clothes inside the room. Bedding such as blanket can also a tool to maintain their visual privacy during sleeping so they can cover their body.

In acoustical privacy, female students of UIN Walisongo resided in female ISH tend to implement it in simple way. The acoustical privacy they were need mostly during phone call or online meeting. To achieve the acoustical privacy inside the room, they just

287

simply using earphone during phone call or online meeting. They will also shut the door to prevent the overheard from outside the room. Whereas, participants also stated that they will leave the bedroom towards corridor, hall, staircase, or office to achieve their acoustical privacy when in call or online meeting.

Furthermore, the mechanism of belongings privacy by participants was much simple but has an implication to sociability aspects. Well established sociability among multi-bedroom users emerges a secure feel for students to store their belongings inside the bedroom. The arrangement in spaces with their roommates that manifested by social connectedness create an intangible security element. Hence, there was a significant positive correlation between sociability and belongings privacy among female students in UIN Walisongo female student housing. The luggage was also their prominent tangible element to secure their belongings. Additionally, identification or naming the belongings placed out of wardrobe is also their mechanism for belongings privacy. The experience of living in the student housing taught students to manage their spatiality for mutual convenience. FGD analysis finds participants' desired privacy in their student housing. encompass personal furniture and wardrobe lock. Soundproof building material is something that desired to prevent from eavesdrop, external noise. Lastly, dedicated fitting room inside the room was the desired privacy for their room to maintain their visual privacy.
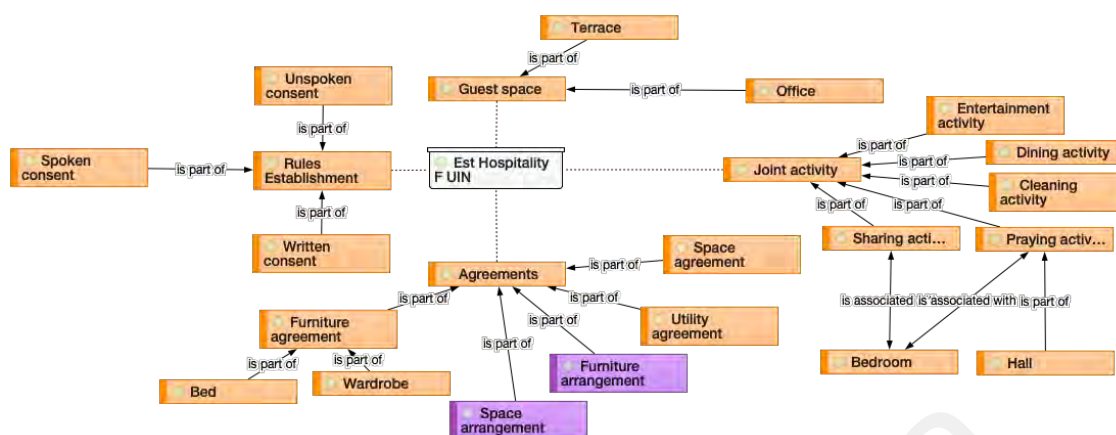
Sociability

Figure 5.90 The establishment of sociability on UIN Walisongo female student housing

Analysis of FGD data of participants from *Ma'had Al-Jami'ah Walisongo* finds intangible implementation of sociability have the majority in the sociability aspects. However, the existence of spaces for guests considerably significant to establish the sociability aspect among female students in Ma'had. Office as the place to receive the guests also a place to implement acoustical privacy when students receive phonecall. Several joint activities for female participants are believed enhanced their social connectedness and generates sociability among occupants. Some fun activities such as dining, making vide content, share the stories and laughter are seemingly establish their togetherness. Praying as their obligatory in performing faith is interestingly found as intangible things to create sociability among female occupants of *Ma'had*. Furthermore, rules and agreements as intangible aspects in sociability were applied by students. Spoken, unspoken, written, and unwritten rules practiced accordingly by students' circle or institution for the sake of discipline training and surprisingly those connect students to be more intimate.
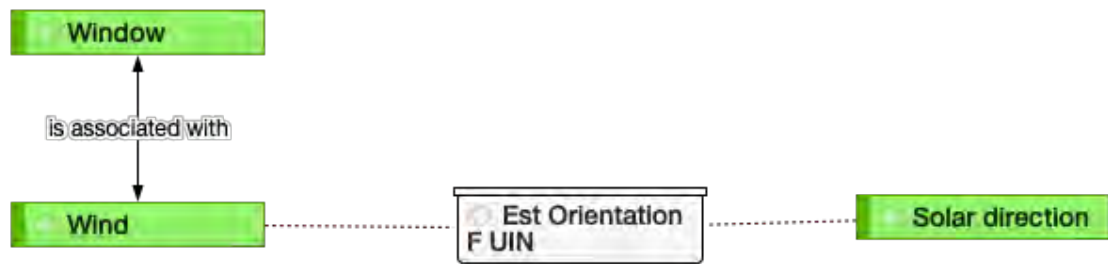
Orientation

Figure 5.91 The desired orientation on UIN Walisongo female student housing

The results of the FGD analysis regarding orientation as locality values are obtainable in the Figure 5.33 above. When asked about building orientation, the participants argued that their desired building orientations aspects are determined by wind, and solar movement. *Ma'had* building is situated above the hill which has a good wind velocity to comfort the room. Hence, first finding regarding orientation is that participants indicate wind their desired building orientation firmly. However, the orientation to cultivate the wind should considering the window due to strongly associated to visual privacy. Furthermore, solar direction also determines their desire building orientation, certain solar direction provides natural lighting for their rooms.

5.2.4.2. Female Participants Cross Analysis Findings of UNWAHAS

A FGD done with female participants of ISH UNWAHAS, and revealed that three aspects of privacy, sociability, and orientation, are correlated each other and establish a dwelling value of Islamic architecture in ISH. The agreements that participants practices among roommates connecting privacy and sociability aspects. In addition, privacy also tight knot to the building orientation preferences where they feel outside building affecting their visual privacy in the bedroom.

A. Privacy

The privacy practices among female participants of ISH UIN Walisongo established in visual, acoustical, and belongings. Its practices visualized in the following figure and table about recap of findings regarding privacy establishment among female participants of ISH UIN Walisongo.

Table 5.18 Recap of privacy establishment of female participants of ISH UIN Walisongo

Privacy in Female ISH UIN Walisongo		
Visual	Acoustical	Belongings
In-room : - Bedding - Space arrangement - Furniture arrangement	In-room : - Earphone - Door	In-room : - Trust - Luggage - Identifying - Space arrangement
Outside : - Bathroom	Outside : - Corridor/ balcony - Staircase	
Desired : - Curtain	Desired : Soundproof	Desired : - Private furniture - Wardrobe lock
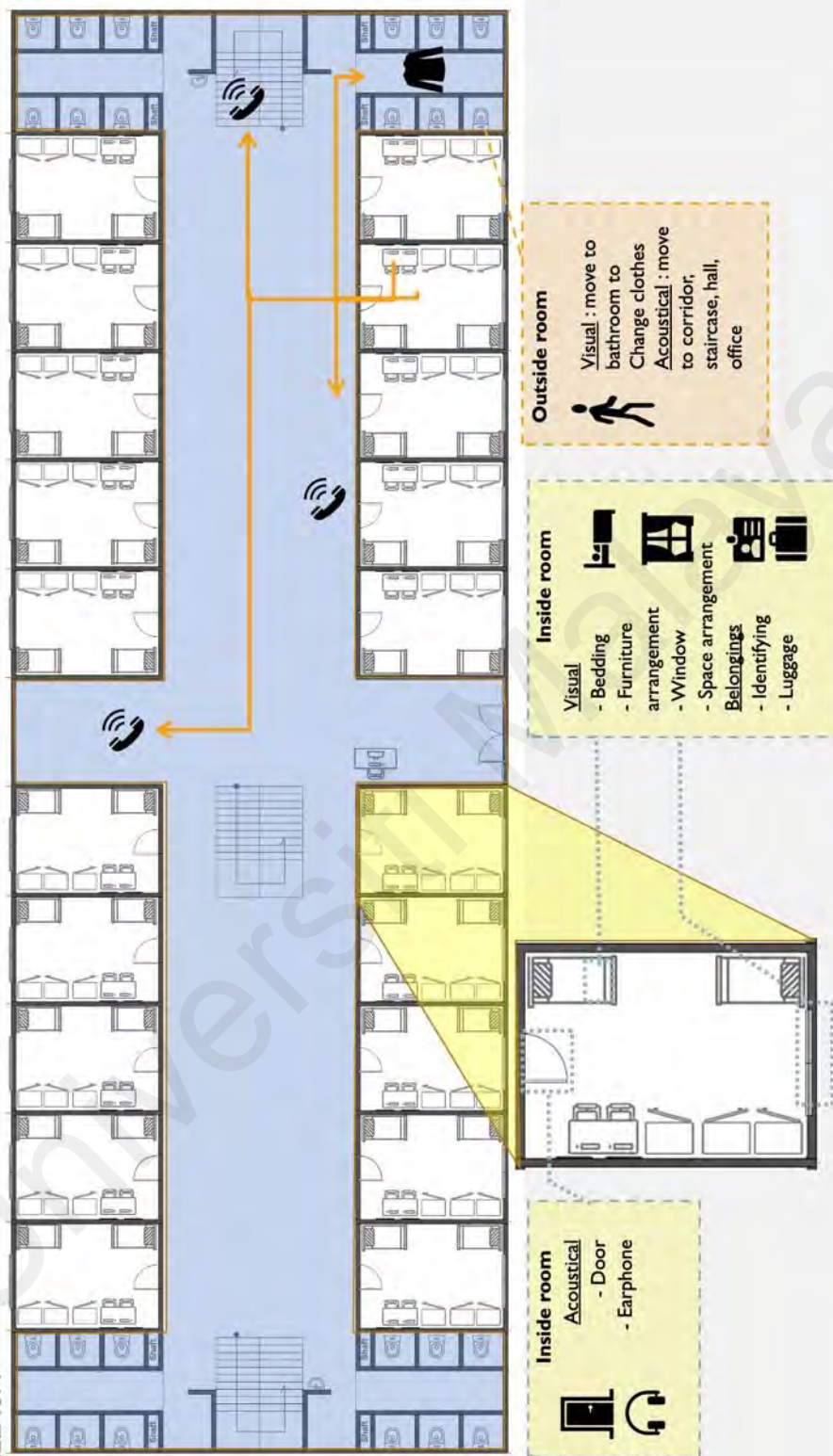
Figure 5.92 Visualization of privacy practices among female participants ISH UIN Walisongo

Visual Privacy in Female ISH UNWAHAS

The visual privacy practiced by female participants of ISH UIN Walisongo conducted inside and outside room. Visual privacy normally practiced to make a secure feeling when participants changing clothes. Besides that, visual privacy also considered as a condition that participants want to concealed and unseen while doing an activity, such as sleeping. In order to establish the visual privacy when participants changing clothes, some treatments were conducted.

a. Provided ISH Properties : Outside bathroom

Female ISH UNWAHAS buildings have multiple bathrooms to accommodate their dwellers. Each floor has two bathroom areas, each with toilets and showers. Each floor has twenty four restrooms, which considerably insufficient to meet the students' needs for taking showers, using the toilet, and changing clothing.

b. Self-properties : bedding

Bedding contributes to the establishment of visual privacy among female occupants of ISH UIN Walisongo. The participants argued that they feel secure and comfort while they cover their face and body with their personal bedding while sleeping.

c. Arrangements : furniture and space

The duality of the closet is the latest finding in the area of privacy. It is possible to increase the level of visible privacy while changing clothing in the room through the use of specific methods, such as move to the corner of the room.

Even though the participants generally feel at ease and at home when living at ISH UIN Walisongo, they have visual privacy preferences that they would like to have that are not now available at current ISH. For example, the participants sought the installation of a curtain as a fitting room to conceal their bodies when changing clothes. The study about the visual privacy of female ISH UIN Walisongo also reveals that windows do not offer visual privacy. Even if a curtain is already installed on a window, an additional layer of glass can be added to block visibility while allowing sunlight to pass through. The occupant must open the window and curtain to enable ventilation, however the window hinge can be placed as a tilt-and-turn window. Thus, privacy can be maintained while the window is open. In addition, a secondary skin could be put in front of the window to give visual privacy, minimise glare, and provide airflow into the room.

Figure 5.93 Facade of female ISH UIN Walisongo (left) and closer look of windows (right)

Acoustical Privacy in Female ISH UIN Walisongo

The acoustical privacy practiced by female participants of ISH UIN Walisongo conducted inside and outside room. Visual privacy normally practiced making a secure feeling when participants making phone call or having online meeting. In order to establish the acoustical privacy when participants in a private call or online meeting, some treatments were conducted.

- Leaving the bedroom

294

To ensure their acoustical privacy, participants must leave their rooms and answer their phones in other areas of the student housing, such as the corridor that is nearest to their bedroom or on the staircase. This option permits students to preserve their acoustic privacy. Unfortunately, those places are not supportive space to receive call or online meeting. The corridor is not equipped with sitting bench or chair to accommodate students while receiving the call.

Figure 5.94 Corridor condition in female ISH UIN Walisongo

- Stay in bedroom

Using earphones in the bedroom allows one to continue a phone or online meeting conversation without fear of being overheard, so achieving the desired level of acoustical privacy. In addition, they will close the bedroom door to increase the acoustical privacy.
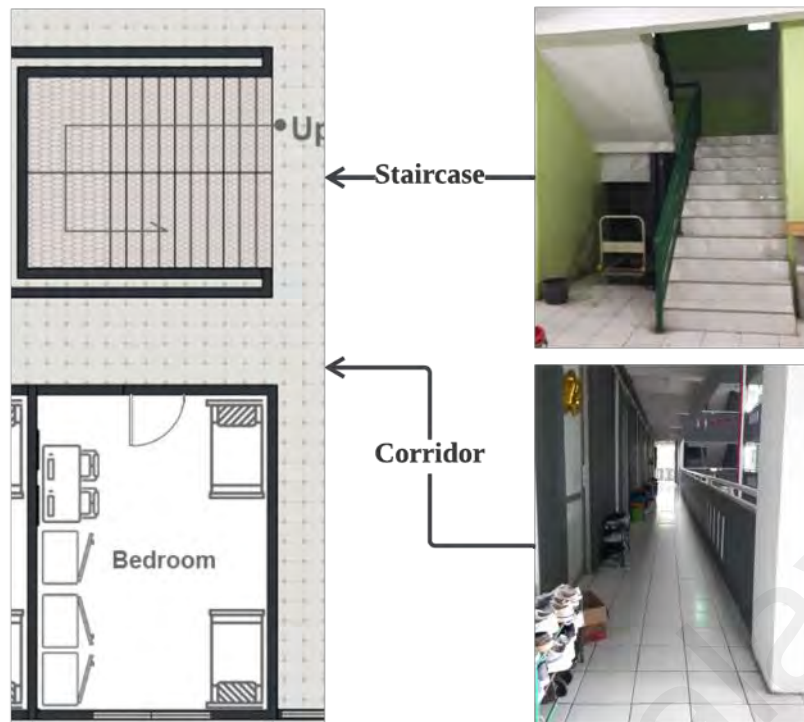
Figure 5.95 Current condition of female ISH UIN Walisongo for acoustical privacy practices

Belongings Privacy in Female ISH UIN Walisongo

The belongings privacy is typically observed to provide a sense of security when participants store their personal belongings or share and trust their personal items with housemates. To establish the privacy of female participants' items at ISH UIN Walisongo, a list of procedures were performed.

- Distribution of space

  Female participants of ISH UNWAHAS were provided with personal amenities such as a bed, wardrobe, desk, and chair. Thus, the personal amenities become the individual's personal space, which they are encouraged to maximise. This personal space becomes an unwritten and unspoken agreement for occupants to use their own personal amenities and not interfere with the rights of other occupants in terms of utilising their own. Additionally, if they use the personal amenities or territory of

296

other occupants, express permission must be obtained. And these are the self-considerations and unspoken rule that residents of ISH UIN Walisongo demonstrate in terms of storing and utilising their own amenities and borrowing their roommates' amenities. Those agreements establish their belongings privacy and strengthen their bond towards sociability between roommates.

- Zoning

   Self-consideration practises motivate occupants to utilise their spaces for storage of their belongings. The participant mentioned that the spaces around the personal amenities also becoming the personal territory as part of occupants' agreement among roommates. Likewise, the area surrounding their bed and wardrobe become an integral component of their zone.

Even though the amenities given by ISH UIN Walisongo are rather comprehensive, some important items such as a wardrobe lock and separate lighting were missing. These small but necessary items should be provided to enhance the residents' comfort and safety.

A. Sociability

   The sociability practices among female participants of ISH UIN Walisongo practised in joint activities, rules establishment, agreements, and the existence of sociability spaces. Furthermore, the following table and figure is the recap and visualization of the sociability practices among male participants of ISH UNWAHAS.

Figure 5.96 Distribution zoning and potential personal belongings in female ISH UIN Walisongo

Sociability in Male ISH UNISSULA		
Joint activities	Rules & agreements	Sociability spaces
- Praying - Cleaning - Dining - Entertainment - Sharing	Rules : - Written - Spoken - Unspoken Agreements : - Space arrangement - Space agreement - Furniture arrangement - Furniture arrangement - Utility	- Office management - Terrace

Figure 5.97 Visualization of sociability practices among female participants ISH UIN Walisongo

- Joint activities

Despite the intensive lecture schedule, the female participants of ISH UIN Walisongo made time for collaborative activities with their roommates and housemates. These activities are typically conducted both inside and outside of the bedroom. The participants' bedroom activities, such as sharing the stories or experiences with roommates. In addition to eating and creating videos, they also engage in these activities with their housemates. Furthermore, participants also involve in cleaning activities that they scheduled with roommates and housemates. Praying as their obligatory in performing faith is interestingly found as intangible things to create sociability among female occupants of *Ma'had*. Furthermore, rules and agreements as intangible aspects in sociability were applied by students. Spoken, unspoken, written, and unwritten rules practiced accordingly by students' circle or institution for the sake of discipline training and surprisingly those connect students to be more intimate.

- Sociability spaces

The practises of sociability occurred not just among roommates and housemates, but also when receiving guests from the outside. The ISH UIN Walisongo offers social areas, which include a terrace and management office. The terrace is utilized to receive male guests, while foyer is available for receiving guests and family members. The ISH female UIN Walisongo is a strictly female ISH that prohibits the presence of men, with the exception of male officer maintenance. Hence, the reception of outside guest limit to terrace or management office.

Figure 5.98 Terrace of ISH UIN Walisongo

B. Orientation

The FGD results from the analysis of female ISH UIN Walisongo indicate a correlation between building orientation preference and visual privacy. The following table is the recap of FGD findings about orientation preferences of female participants ISH UIN Walisongo.

Table 5.19 Recap of building orientation preferences of female participants ISH UIN Walisongo

Orientation preferences		
Privacy	Solar movement	Wind
- Facing the constructional building	- Preferably : - Towards sunrise	Thermal comfort

A participant in the FGD reported that the window, which is visible from the exterior of the building, may threaten the visual privacy of their room. Participants feared a visible privacy violation as a result of the proximity of the ISH UIN Walisongo to the construction building. Therefore, students always keep a watchful eye on the window and keep it closed when visual privacy is required. Therefore, the design of the window should fulfil its function as a ventilation without compromising the user's privacy. Specifically for female ISH, the secondary skin or another model such as *mashrabiya*, an external window device that reduces glare while allowing air intake and ensuring privacy, should

be utilised. In addition, participants consider the building's orientation in terms of thermal and brightness comfort. The participants stated that their preferred building orientation is to maximise wind flow and solar movement in order to see the sunrise in the morning.

Figure 5.99 Closer look of the window in ISH UIN Walisongo that plainly without glass layer / shading
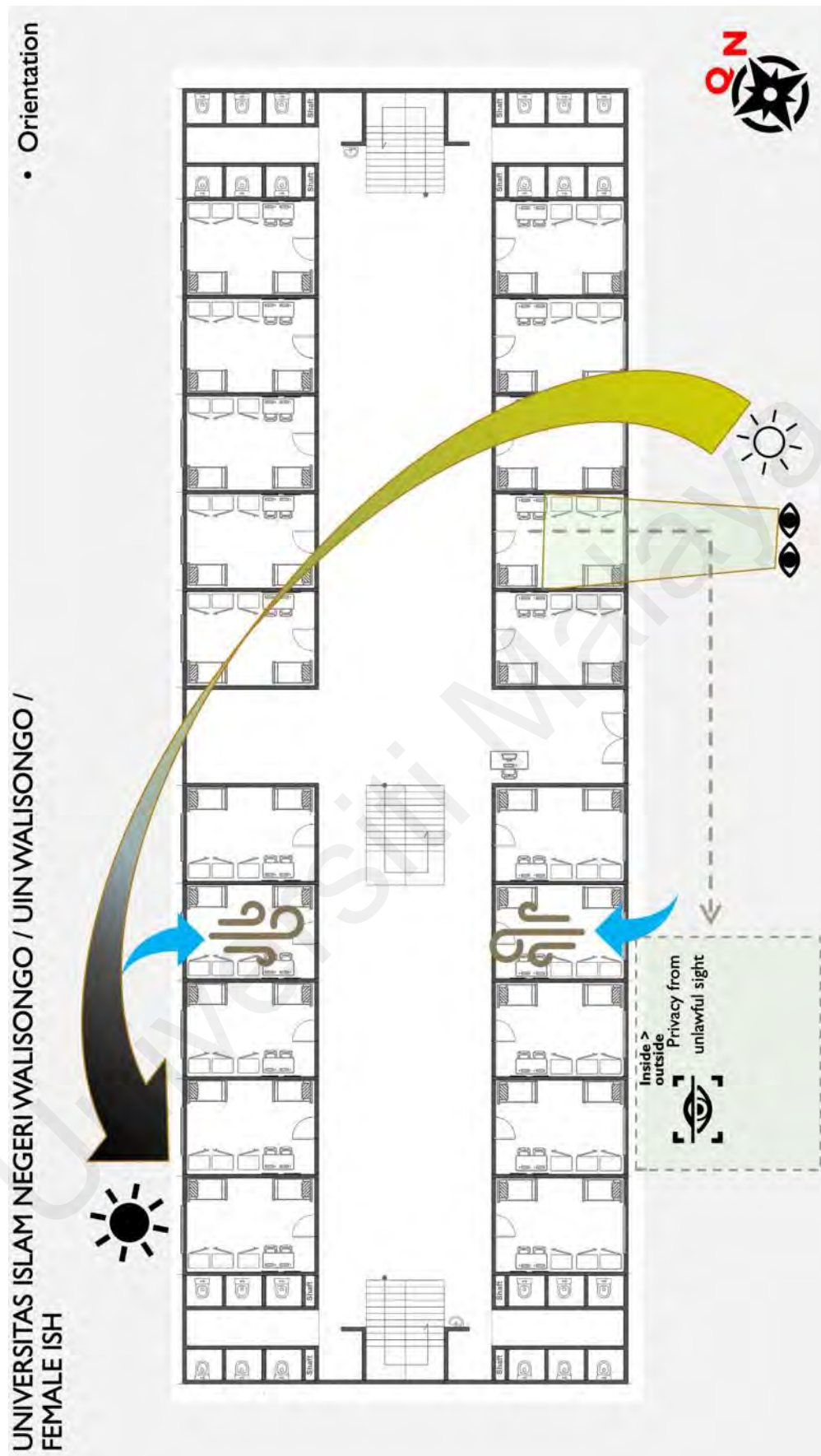
Figure 5.100 Visualization of building orientation preferences for female participants ISH UIN Walisongo

303

5.3. Comparison of Islamic Student Housings (ISHs)

The study conducted in four Islamic student housings with various developers or builders, built by The Ministry of Public Works and Housing (MPWH) and built by the institution itself. Findings of the study reveal the differences of the participants' arguments regarding the practices of privacy, sociability, and orientation. The institution has no control for the student housing that found and built by MPWH in terms of design and values to the Islamic activities. It is a grant which the institution only provide the site, while ministry found and built the student housing completely. Furthermore, the institutional built Islamic student housing has a total control of development from the planning, constructional, and after completion. The study found some improper spatial design that affecting the practices of privacy, sociability, and building orientation. despite the students ability to tackle the improper spatial design, this findings should be elaborate to generate the future Islamic student housing which considering the needs of students in privacy, sociability, and orientation properly. The table below explains the differences between ministry-built student housing to the institutional-built student housing in the practices of privacy, sociability, and orientation.

Location of ISH	Developer	Value	Improper practices
Male ISH of UNISSULA	MPWH	Privacy	- Improper space for changing cloth - Visibility from outside through windows - Wardrobe without lock - Unseparated power plug and lamp
		Sociability	- No hall for mass gathering - No proper receiving guest space
		Orientation	- Glare
Female ISH of UNISSULA	Institution	Privacy	- Improper space for changing cloth - Visibility from outside through windows
		Sociability	- No issue

304

		Orientation	- Less privacy in visual due to facing the public spaces - Glare
Male ISH of UNIMUS	Institution	Privacy	- Improper space for changing cloth
		Sociability	- No issue
		Orientation	- Other side of the building has no interesting view
Female ISH of UNIMUS	MPWH	Privacy	- Improper space for changing cloth - Window model breaching the visual privacy - Unseparated power plug and lamp - Lack of furniture distribution
		Sociability	- No issue
		Orientation	- Less privacy in visual due to facing the public spaces
Male ISH if UNWAHAS	MPWH	Privacy	- Transparent window glass without curtain - Door and wardrobe without lock
		Sociability	- No proper receiving guest space
		Orientation	- Glare - Heat
Female ISH of UNWAHAS	MPWH	Privacy	- Improper space for changing cloth - Window model breaching the visual privacy - Lack of furniture distribution - CCTV needed
		Sociability	- No issue
		Orientation	- Less privacy in visual due to facing the public spaces
Female ISH of UIN	MPWH	Privacy	- Improper space for changing cloth - Lack of furniture distribution - Wardrobe without lock
		Sociability	- No issue
		Orientation	- Less privacy in visual due to facing the public spaces

Figure 5.101 Comparison of ISHs based on the issue

The table above shows the improper practices of the values by student from selected study locations. The ISH built by institution for male represented by UNIMUS and female

305

ISH represented by UNISSULA. Furthermore, the rest of the study locations represent ISH built by the ministry, encompass male ISH of UNISSULA, female ISH of UNIMUS, male and female ISH of UNWAHAS, and female ISH of UIN. The table above explains that both ISH lack of proper space for changing room. The presence of simple changing room from curtain is immensely needed by the participants from both ISH. Furthermore, the ISH built by MPWH has more lack of proper amenities than institutional built ISHs. Particularly the presence of proper spaces to do the sociability with housemates, the institutional built ISH has proper and accommodating sociability spaces.

5.4. Conclusion of Findings

The information gathered from four research location expands the privacy, sociability, and orientation practises of ISH's student residents. These practises demonstrate that their experience of living in ISH has taught them the meaning of togetherness, understanding, sharing, and solidarity. Due to the fact that they reside in multi-user bedrooms, the privacy and sociability habits and orientation preferences of ISH residents are comparable. Nonetheless, some individuals from distinct ISHs had varying conceptions of the three elements. The summary of the four ISH research locations is provided below.

Summary of Findings in Universitas Islam Sultan Agung (UNISSULA)

- Privacy

    In general, male and female participants practise visual, acoustical, and belongings seclusion. Participants practised visual privacy for the first time within the room by utilising ISH amenities such as the wardrobe, door, and curtain. In addition, participants of ISH UNISSULA use their own belongings, such as prayer robes or other fabrics, to establish visual privacy. Those who utilise bedroom

treatments seek to conceal their bodies from their roommates while preserving their visual privacy. In the meantime, both male and female participants say that the bathroom is the only place outside the bedroom that provides visual privacy when changing clothes. In order to achieve a sense of security when changing clothing, participants would leave the bedroom in this instance.

The following privacy practise is acoustic privacy, where participants request isolation during a phone call or online meeting. Both male and female participants practise acoustical privacy by leaving or remaining in the bedroom. Participants desiring a sense of convenience and security while receiving a call or participating in an online conference must leave their bedroom and move to locations such as a corridor, balcony, staircase, or lobby in order to do so. In addition, participants remain in their bedroom with their roommates while getting a call or participating in an online meeting. They will use personal items such as earphones, headphones, and even blankets to prevent their housemates from hearing their conversations.

The last privacy finding is regarding the security for the belongings, whereby participants demanding protected spaces for their stuff. Participants practise spatial arrangements, such as the distribution of ISH amenities, to achieve a sense of safety when leaving their stuff. The distribution of spatial arrangements creates personal storage and security areas for each individual's stuff. Participants also practise negotiation to share spaces and property with other roommates. The lack of space in a multi-user bedroom forces the inhabitants to negotiate in terms of amenities and space. This negotiation is similar to the behaviours they developed as a result of sharing a bedroom.

- Sociability

The sociability practices among participants both male and female can also be located inside and outside of the bedroom. The establishment of sociability in the bedroom is certainly practised exclusively by occupants of ISH. Hence the inside bedroom practices of sociability can be concluded as occupant spaces. The activities to establish the sociability among roommates and housemates such as congregational praying, dining, gaming, cleaning, sharing the stories. Furthermore, the findings also reveal the sociability spaces for guests. The guests such as family, classmates, or any other outsider guests can be received at the terrace, lobby, and hall.

The activities they have undertaken with roommates and housemates inevitably contribute to the emergence of sociability. The casual activities often undertaken in the aforementioned occupant areas. In addition, formal activities performed and fostered the sociability of ISH occupants. Formal activities are typically required by ISH and universities, such as extracurricular activities, collective prayer, religious studies, and festivals.

- Orientation

Participants' preferences for building orientation were determined in terms of their visual, thermal, and personal comfort. Visually, the participants' preference for building orientation was a good view from their windows. Participants argued that a pleasant view from their bedroom window could improve their mood. In addition, female participants demanded privacy for their visual orientation due to a sense of insecurity over the outside building's ability to observe their visual private. Thermal comfort also become one of their building orientation choices due to the air intake to the bedroom as natural cooling. Solar movement, which causes glare and heat transfer, also influences the thermal comfort. Therefore, participants seek to prevent east or west building orientation. In addition, individual preferences, such as the

cultural argument made by a male participant, also influence their choice in building orientation.

Summary of Findings in Universitas Muhammadiyah Semarang (UNIMUS)

- Privacy

Basically, male and female participants practice the privacy in visual, acoustical, and belongings. First visual privacy practiced by participants inside the room by utilizing curtain, and wardrobe as amenities from ISH. Furthermore, participants of ISH UNIMUS also utilizing their own properties to achieve the visual privacy, such as praying clothes, or any other fabrics. Sleeping position also determined the privacy in which participant argued that pretend to hide the face while sleeping to reduce exposed by other roommates. A consent also conveyed to ask the roommates while participant needs a visual privacy. Those inside bedroom treatments aim to cover their body from the roommates while need a visual privacy. Meanwhile, both male and female participants argue that bathroom is the only outside bedroom that provide a seclusion to achieve visual privacy when needing clothe changing. Thus, in this case, to achieve secure feeling to their self when changing the clothes, participants would move to outside bedroom.

The next privacy practices found among is acoustical privacy where participants demand for seclusion while having phone call or online meeting. Both male and female participants practice the acoustical privacy by leaving the bedroom or remain to stay in bedroom. Leaving the bedroom means that participants demanding a convenience secure feeling while receiving call or online meeting by moving to spots around their bedroom such as corridor, balcony, stairs, hall, or lobby. Additionally, participants also remain stay in the bedroom with their roommates while receiving call or online meeting. They will utilize their own properties such as

earphone, headphone, or even under the blanket to reduce the voice being overheard by their roommates.

The last privacy finding is about the security for the belongings, which participants demanding secure spaces for their belongings. To achieve the secure feeling while leaving the belongings, participants practicing spatial arrangements such as distributing of ISH amenities. the distribution of spatial arrangements establishes the personal safe spaces to store and secure their own belongings. In the other hand, participants also practising negotiation to share the spaces, and properties with other roommates. The limitation of spaces in a multi-user bedroom makes the occupants practicing negotiation in terms of spaces and amenities. This negotiation is kind of practices they established as the result of staying in a multi-user bedroom.

- Sociability

The sociability practices among participants both male and female can also be located inside and outside of the bedroom. The establishment of sociability in the bedroom is certainly practised exclusively by occupants of ISH. Hence the inside bedroom practices of sociability can be concluded as occupant spaces. The activities to establish the sociability among roommates and housemates such as congregational praying, dining, gaming, cleaning, sharing the stories. Furthermore, the findings also reveal the sociability spaces for guests. The guests such as family, classmates, or any other outsider guests can be received at the terrace, lobby, and hall.

The establishment of sociability is inevitable to the activities they have performed with roommates and housemates. The casual activities usually performed as mentioned in the occupant spaces previously. Additionally, formal activities also performed and established the sociability among ISH occupants. The formal

activities are usually the compulsory activities from ISH and universities, such as the extracurricular, congregational prayer, religious study and festival.

- Orientation

The preferences of building orientation among participants found in terms of their comfort visually, thermal, and personal. Visually, the participants demanding good view of their windows as their preferences of building orientation. The participants argued that good view from their bedroom window can boost their mood. Additionally, female participants demanding privacy for their visual orientation since the insecurity feeling towards outside building about their visual privacy that can be seen from outside. Thermal comfort also become one of their building orientation preferences due to the air intake to the bedroom as natural cooling. The thermal comfort also determined by the solar movement which cause glare and heat transfer. Hence the participants prefer to prevent the building orientation to east or west. Furthermore, the personal preferences also determine their choice in building orientation such as cultural reason that argued by male participant.

Summary of Findings in Universitas Wahid Hasyim Semarang (UNWAHAS)

- Privacy

In this study, both male and female individuals engage in the exercise of maintaining privacy in several domains, including visual, acoustical, and personal belongings. The participants of the ISH UNWAHAS additionally use personal belongings, such as prayer clothes or other fabrics, in order to achieve visual privacy. They also arrange a space in the corner of the bedroom to change the clothes while in the bedroom with other roommates. The female ISH UNWAHAS also provide speaker to warn occupants during guests visit, hence they would not leave the room without decent clothes. In the present discourse, it is contended by individuals of

311

both genders that the toilet serves as the sole external space that affords the level of confinement necessary for attaining visible privacy during the process of changing the clothes. Therefore, in this particular case, participants would relocate to an area outside of the bedroom in order to experience a sense of security while changing their clothes.

The following privacy practise is acoustic privacy, where participants desire seclusion during a phone call or online meeting. Both male and female participants practise acoustical seclusion by exiting or remaining in the bedroom. Participants desiring a sense of convenience and security while receiving a call or participating in an online meeting must leave their bedroom and move to locations such as a corridor, balcony, staircase, or lobby in order to do so. In addition, participants remain in their bedroom with their companions while receiving a call or participating in an online meeting. They will use personal items such as earphones, headphones, and even arrange a proper space in the room before online meeting to prevent their companions from hearing and appear on screen during their conversations.

The final privacy finding concerns the security of the participants' belongings, with participants requesting secure spaces for their belongings. Participants practise spatial arrangements, such as the distribution of ISH amenities, to obtain a secure feeling when leaving their belongings. The distribution of spatial arrangements establishes personal safe spaces for individuals to store and secure their own belongings. Participants practise negotiation to share spaces and property with other housemates. The lack of spaces in a multi-user bedroom forces the occupants to practise negotiation in terms of spaces and amenities. This negotiation is similar to the practises they developed as a result of sharing a bedroom.

- Sociability

The sociability practises of male and female participants can also occur inside and outside the bedroom. The practise of establishing sociability in the bedroom is unquestionably unique to ISH residents. Consequently, bedroom socialisation practises can be categorised as occupant spaces. The activities that foster bonding among roommates and housemates, such as congregational prayer, patrol schedule, cooking, and sharing stories. In addition, the findings disclose the spaces for visitor interaction. The terrace, lobby, and hall can be used to receive visitors such as family members, classmates, and other outsiders. The activities they have performed with roommates and housemates inevitably lead to the development of sociability. The casual activities typically conducted in the aforementioned occupant spaces. In addition, formal activities performed and fostered the socialisation of ISH occupants. Formal activities are typically required by ISH and universities, such as extracurricular activities, congregational prayer, religious study, and festivals.

- Orientation

In terms of their comfort visually, thermally, and personally, participants' preferences for building orientation were discovered. Visually, the participants' preference for building orientation was a nice view from their windows. Participants stated that a pleasant view from their bedroom window can improve how they feel. In addition, female participants demanded privacy for their visual orientation due to a sense of worries regarding the outside building's ability to observe their visual privacy. Due to the air intake into the bedroom as natural ventilation, thermal comfort has become one of their building orientation preferences. Solar movement, which causes radiation and heat transfer, also influences the thermal comfort. In addition, individual preferences, such as the cultural argument made by a female participant,

and Qibla direction argued by male participant also influence their choice in building orientation.

Summary of Findings in Universitas Islam Negeri Walisongo (UIN Walisongo)

- Privacy

In this study, only participated by female students and were engage in the exercise of maintaining privacy in several domains, including visual, acoustical, and personal belongings. The initial step taken by participants to ensure visual privacy within the room involves utilising amenities provided by the ISH, such as wardrobes, doors, and curtains. In addition, participants of the ISH UIN Walisongo additionally use personal belongings, such as prayer bedding. The purpose of implementing interior treatments within bedrooms is to provide individuals with a means of concealing their bodies from their roommates, so ensuring a level of visible privacy. In the present discourse, it is contended by individuals of both genders that the toilet serves as the sole external space that affords the level of confinement necessary for attaining visible privacy during the process of changing the clothes. Therefore, in this particular case, participants would relocate to an area outside of the bedroom in order to experience a sense of security while changing their clothes.

The following privacy practise is acoustic privacy, where participants desire seclusion during a phone call or online meeting. Both male and female participants practise acoustical seclusion by exiting or remaining in the bedroom. Participants desiring a sense of convenience and security while receiving a call or participating in an online meeting must leave their bedroom and move to locations such as a corridor, staircase, hall, or lobby in order to do so. In addition, participants remain in their bedroom with their companions while receiving a call or participating in an online

314

meeting. They will use personal items such as earphones, headphones, or just simply close the bedroom door to prevent their housemates from hearing their conversations.

The final privacy finding concerns the security of the participants' belongings, with participants requesting secure spaces for their belongings. Participants practise spatial arrangements, such as the distribution of ISH amenities, to obtain a secure feeling when leaving their belongings. The distribution of spatial arrangements establishes personal safe spaces for individuals to store and secure their own belongings. Additionally, participants also distinguishing their personal belongings to prevent switch with other roommate's belonging. Participants practise negotiation to share spaces and property with other housemates. The lack of spaces in a multi-user bedroom forces the occupants to practise negotiation in terms of spaces and amenities. This negotiation is similar to the practises they developed as a result of sharing a bedroom.

- Sociability

The sociability practises of male and female participants can also occur inside and outside the bedroom. The practise of establishing sociability in the bedroom is unquestionably unique to ISH residents. Consequently, bedroom socialisation practises can be categorised as occupant spaces. The activities that foster bonding among roommates and housemates, such as congregational prayer, dining, cooking, and sharing stories. In addition, the findings disclose the spaces for visitor interaction. The terrace, lobby, and hall can be used to receive visitors such as family members, classmates, and other outsiders. The activities they have performed with roommates and housemates inevitably lead to the development of sociability. The casual activities typically conducted in the aforementioned occupant spaces. In addition, formal activities performed and fostered the socialisation of ISH occupants.

Formal activities are typically required by ISH and universities, such as extracurricular activities, congregational prayer, religious study, and festivals.

- Orientation

In terms of their comfort visually, thermally, and personally, participants' preferences for building orientation were discovered. Visually, the participants' preference for building orientation was a nice view from their windows. Participants stated that a pleasant view from their bedroom window can improve how they feel. In addition, female participants demanded privacy for their visual orientation due to a sense of worries regarding the outside building's ability to observe their visual privacy. Due to the air intake into the bedroom as natural ventilation, thermal comfort has become one of their building orientation preferences. Solar movement, which causes radiation and heat transfer, also influences the thermal comfort. Therefore, participants prefer to prohibit east or west building orientation. In addition, individual preferences, such as the cultural argument made by a male participant, also influence their choice in building orientation.

CHAPTER 6 DISCUSSION: THE ESTABLISHMENT OF PRIVACY, SOCIABILITY, AND ORIENTATION

6.1. Introduction

This chapter discusses the significance and meaning of privacy, sociability, and orientation for students living in student housing. Additionally, this chapter discusses the correlation of privacy, sociability, and orientation to Islamic values in architecture. In this chapter the importance of privacy, sociability, and building orientation will be discussed to later become the basis for future student housing designs. The findings from previous sub-chapter arise a conclusion on the establishment of the three aspects in Islamic Student Housings, privacy, sociability, and orientation. Based on the findings of four Islamic student housings that include of male and female participants, the three aspects appears identical. Between male and female participants, the building orientation might has significant difference in terms of visible privacy from inside to outside the bedroom. But the remainder aspects, privacy and sociability are the comparable establishment.

6.2. The Establishment of Privacy

Privacy is primarily concerned with establishing a sense of safety and achieving security. The previous subchapter on visual privacy focused primarily on self-security and how to obtain it by avoiding others' sight. Then, self-security includes not only visible privacy, but also acoustic privacy, which the participants use to protect themselves from eavesdropping. The following figure is the diagram of privacy aspect establishment among participants.
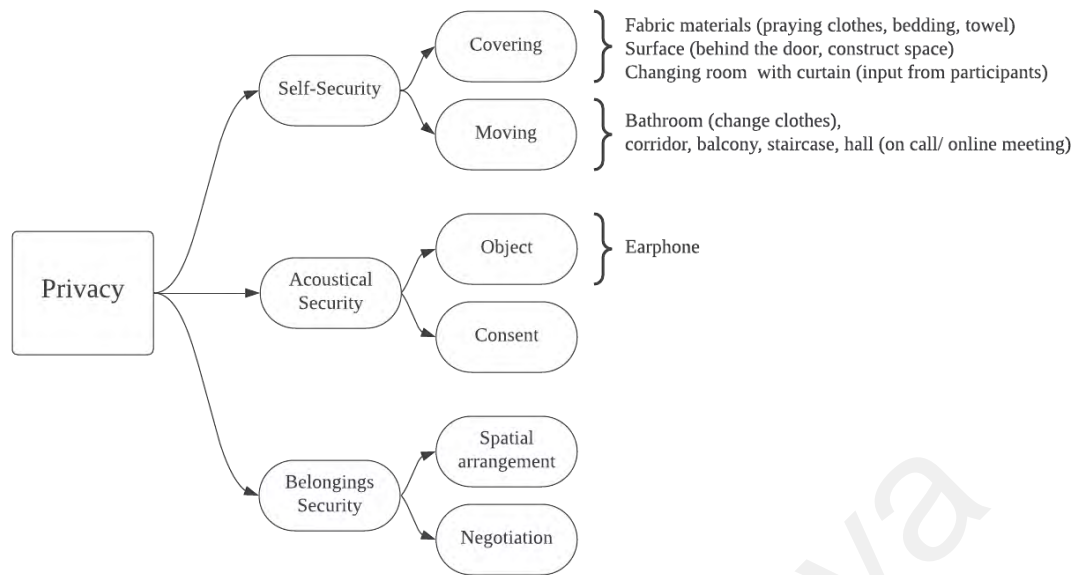
Figure 6.1 The establishment of privacy aspect among participants

6.2.1. Self Security

The establishment of self-security revealed that it can be attained by covering and moving. Participants can utilise fabric materials (praying clothes, blankets, hanging towels) or a surface (wardrobe door) to cover themselves when they require privacy. In addition, moving means making an effort to exit the bedroom in order to get privacy. Moving can be established visibly by moving to the bathroom to change clothing and acoustically by leaving the bedroom to take a call or participate in an online meeting without disturbing roommates.
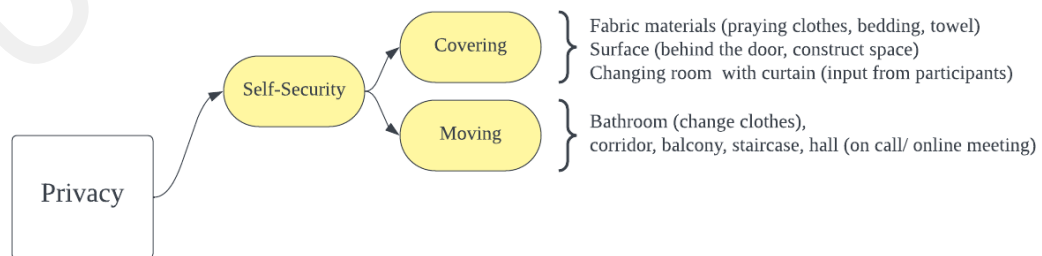
Figure 6.2 The Establishment of Privacy in Self Security

-   **Covering**

Some objects involve in this self-security of privacy establishment among students residing in student housing. Both male and female students utilize fabric materials and surface to ensure their visual privacy while they are changing clothes in a multi user bedroom. The utilization of fabric is acknowledged as the simplest and most secure way to ensure the visual privacy. By using sarong for male students and prayer robe for female students in changing clothes make their privacy practices easier and faster. The utilization of praying clothes makes them to stay in the bedroom when hanging the clothes even with roommates in there. Additionally, the utilization of fabric as privacy keeper also involving the towel or bedding which hang around the bunkbed. The hanging fabric can be a visual barrier for student to change their clothes inside the bedroom or even doing something disappearing from roommate's sight, such as sleeping.

The significance of covering the body to ensure the self-security also established by constructing a barrier to unconcealed the body appearance. The absence of designated changing room in the multiuser bedroom requires students to construct their own changing room by arranging some surface to unconcealed the body. The arrangement of some surfaces such as bedroom or wardrobe door are the options to construct the visual barrier to ensure the self-security. Apart from fabric, the surface can also be covering the body to ensure the coverage in visual privacy.

In addition, the participants which are students occupant give feedback through the study about the designated changing room in the bedroom. Even the tiny space with the curtain such as fitting room would make students thank for that. The fitting room expectedly to ease the students when changing the clothes and ensuring their visual while in the bedroom with their roommates. The suggestion of fitting room would leave the

student in the bedroom while changing clothes without leaving to bathroom that located outside of the bedroom.

-   Moving

Moving is the activity in switching the space to find the privacy space in order to self-securing. This activity including privacy in visual and acoustical which usually move from bedroom with roommates to seclusion space outside of bedroom. The visual privacy including moving as the self-securing by requiring the students to change their clothes in the bathroom. This action allowing them to find their visual privacy while changing clothes without appeared by other roommates. Furthermore, the action of moving to other spaces also to ensure acoustical privacy from overheard by others. To ensure the privacy while they are having phone-call or online meeting. The participants were moving from bedroom to other spaces in the student housing such as on the corridor, balcony, staircase, or at the hall.

6.2.2. Acoustical Security

The second privacy finding is acoustic, indicating which conversational participants require privacy. This type of privacy treatment was previously described in Self-security, therefore this study explains how to obtain acoustical security by employing an object and communicating consent. Participants use earphones or headphones in order to achieve acoustical security. Participants can conduct a secure phone or internet meeting with this object without leaving the room or being overheard by roommates. In addition, participants inform their roommates that they require privacy while calling or participating in an online meeting. And this treatment is a result of self-awareness, which

involves understanding the needs of their housemates and deliberately giving them the privacy they require.
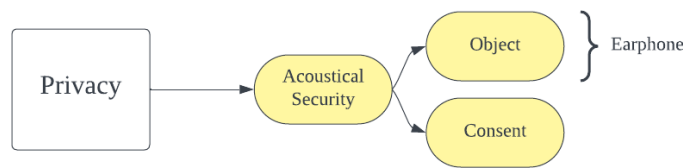
Figure 6.3 The Establishment of Privacy in Acoustical Security

-   Object

The participants of the study argued that to achieve acoustical security is by using an object, such as earphone, to remain their privacy. By using the earphone, students would achieve the acoustical privacy without leaving the bedroom and without heard by the roommates. Furthermore, the usage of earphone as an object also aims to reduce disturbance to other roommates due to the phone call or online meeting conducted in the bedroom. The object constructs an acoustical privacy in a multiuser bedroom by allowing the user to receive phone call or online meetings without overheard or disturbing other roommates.

-   Consent

The establishment of self-security to achieve privacy found that not only materiality or spatiality to achieve the privacy, spoken consent also involved to ensure the privacy. The study found that this unique mechanism of privacy establishment relies on trust. The students as the occupants of the student housing have bond and trust to their roommates in terms of preserving their privacy. Consent involving communication to the roommate as a request of privacy demand from the participants of the study. For the example, the participants ask their roommate to not to look at them while changing the

321

clothes, to remain silent while having phone call or online meeting, or to keep an eye to save their belongings. Hence, consent is the easiest way to preserve their privacy just by requesting to their roommate.

6.2.3. Belongings Security

The last privacy finding concerns what participants undertake to secure their belongings without compromising the privacy of their housemates. To attain this level of seclusion, participants need make spatial arrangements, including the distribution of personal amenities from ISH and the storage of personal items across their space. This treatment requires participants to optimise their space while sharing a bedroom without invading the space of their housemates. Lastly, belongings security can also be obtained through roommate negotiations. Living in a multi-occupant bedroom develops negotiation skills for the sake of mutual comfort. The participants will share the space with roommates or build a communal space in the bedroom. In addition, the agreement established verbal consent for asking their roommates to care for their items when they are not there.
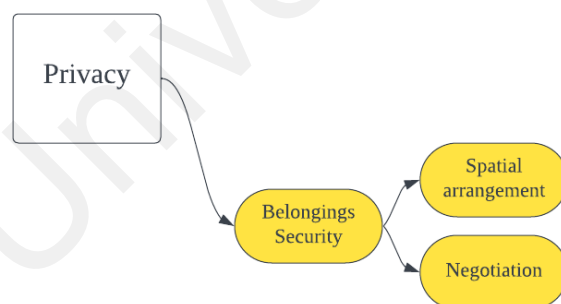
Figure 6.4 The Establishment of Privacy in Belongings Security

-   **Spatial Arrangement**

The participants of the study argued that to achieve acoustical security is by using some arrangement in spatial, including zoning and furniture. The spatial arrangement involving the zoning and furniture ownership of each bedroom occupants. The spatial arrangement is part of negotiation that will be explained in the next section where each student in a bedroom have their own agreement in the private zoning to store the belongings.

-   **Negotiation**

The students in a bedroom establish their agreement on the zoning, belongings, and even the privacy. Hence, negotiation is closely related to spatial arrangement in terms of spatiality and zoning. The involvement of negotiation directly creates privacy and consideration to follow the rule for mutual comfort.

6.3. The Establishment of Sociability

Staying in Islamic Student Housing (ISH) is a possible opportunity for students to acquire social skills, network, and develop relationships with roommates and housemates. Social aspects of ISH are established through spaces, activities, and rules based on its practice. The following figure is the diagram, of the sociability established by students in Islamic student housings.
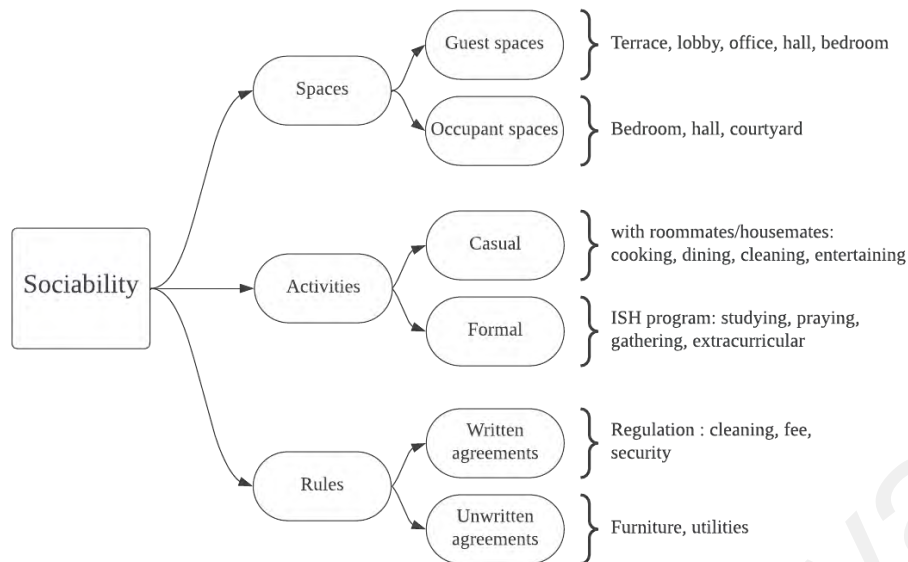
Figure 6.5 The establishment of sociability aspect among participants

6.3.1. Spaces

Spaces that create sociability provide amenities for guests and occupants. Guests can be received in the terrace, lobby, office, and hall, among other areas, as part of the guest spaces. The occupant spaces accommodate sociability behaviours for residents of ISH that based on findings conducted in bedroom, hall, and courtyard. Thus, these are the locations where occupants engage in activities with roommates, housemates, or while attending official ISH events.
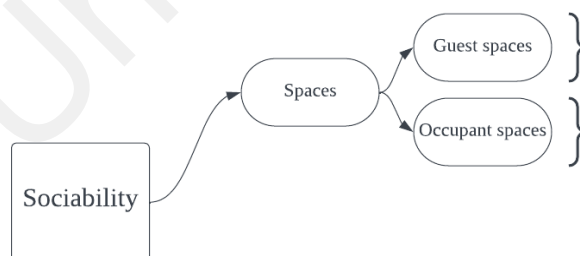
Figure 6.6 The Establishment of Sociability in Spaces

324

- **Guest Spaces**

The existence of guest space considered as a multi-function space for visitors and students of Islamic student housings. Guest spaces functioned as a room to receive the guests of occupant or student housing's management staff. The area of guest space usually located in the lobby, designated room to receive guests, hall, or even designated bedroom for overnight guests. More than that, guest space also utilized by students as a space to socialize with their roommates and housemates. Students usually use the guest spaces for dining, studying, discussion, or practicing extracurricular.

- **Occupant Spaces**

Occupant space considered as a space functioned by occupants of student housing to interact with their housemates or friends. This kind of spaces consist of inside and outside of bedroom. Inside the bedroom to interact with roommates or housemates, which member of student housing. This area is exclusively for occupant of student housing or outsider can also access the bedroom with some strict rules, such as same gender only, family or relatives, and with management acknowledgement only. Furthermore, outside of bedroom as the occupants' spaces to interaction are located in the hall and on the courtyard. They usually use those spaces for interaction with housemates while doing other activities, such as Islamic study recitation, extracurricular, or dining.

6.3.2. Activities

The subsequent findings in sociability practises are the inhabitants' activities during their stay in ISH. Staying with housemates of the same age and attending the same university strengthens their closeness. By participating in shared activities with roommates, such as cooking, dining, cleaning, and some forms of entertainment, the residents become closer and deepen their social connections. These stress-relieving and

time-filling activities that occupants engage in during their university studies. In addition, ISH provides formal activities, such as religious activities and extracurriculars, for its occupants. These structured events were built to maintain the occupants of ISH religiously focused and to reinforce their devotion. Furthermore, ISH offers extracurricular activities, such as archery, speech, English club, and *rebana* (religious musical instrument), to help occupants discover their talents. The following figure is the diagram of sociability aspect establishment among participants.
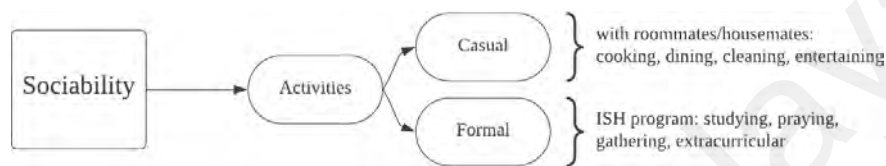
Figure 6.7 The Establishment of Sociability in Activities

- **Casual**

The casual activities are the informal agenda between occupants with their roommates or housemates. Those activities including daily personal chores, hobby, or other daily activities that do not accommodate by student housing management. The provided facilities of the building can be utilized by students to accommodate their living or even hobby. The cases of student housing in this study provide a kitchen or pantry to accommodate students' need in dining or practicing cooking as hobbies.

- **Formal**

The formal activities consist of the regular routines provided by student housing management that involving mandatory activity program for occupants of Islamic student housing. The program consists of Islamic or academic activities that usually conducted in the hall that can accommodate whole building occupants. During the programme students not only interact with lecturer or tutor but also with other housemates.

326

6.3.3. Rules

The unique finding of the study found that rules is one of the sociability factors in Islamic student housings that can strengthen the social connectedness among students. Both written and unwritten rules applied in the Islamic student houses creates the students in the discipline and unified to their roommates and housemates.
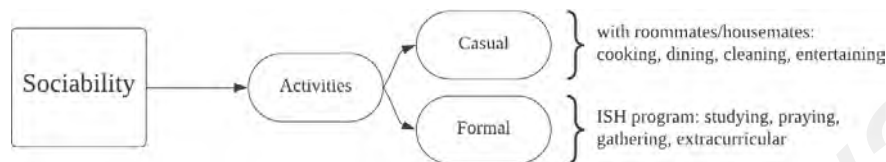
Figure 6.8 The Establishment of Sociability in Rules

- **Written Agreements**

As part of the formal Islamic institution, student housings also applied some rules to discipline students as part of learning. The case of student housings in this study applying some written agreement as part of rules during staying in Islamic student housings. Those agreements encompass service fee for cleaning service and security schedule. The cleaning service fee applied to some Islamic student housing which provide cleaner staff to clean up the communal area including lobby, hall, corridor, and toilet. The private space of occupants such as bedroom is not included in the service which should be the responsible of the occupant itself. Furthermore, the security schedule is the case of UNWAHAS male student housing which requires the occupants to participate in the security agenda every night to secure the building.

- **Unwritten Agreements**

The unwritten rules in the Islamic student housing of this study occurred by the agreements between occupants. This kind of agreement usually established by spoken consent between roommates regarding the ownership of properties in a multi-user

bedroom. They agree to share the furniture and utilities to their roommates with some consideration that conveyed by spoken.

6.4. The Establishment of Orientation

The final aspect of inquiry regarding the participants' ISH experience is their building orientation expectations. Due to their temporary stay in ISH, participants cannot establish this aspect, but it is nonetheless expected. The orientation has a close relationship with their bedroom's comfort from and to external factors. In addition, the findings clarified the orientation part of ISH, which included the following comforts: visual, natural condition, and personal.
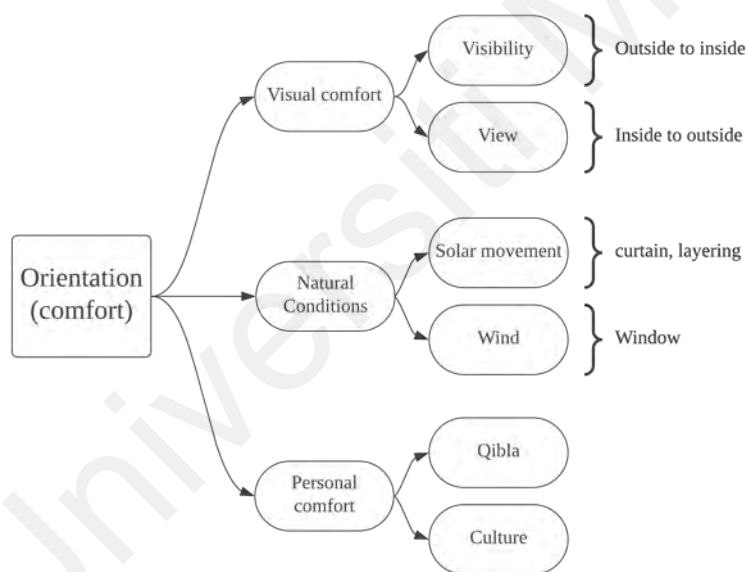
Figure 6.9 The establishment of orientation aspect among participants

6.4.1. Visual Comfort

The first aspect of orientation is visual comfort, which includes the participants' expectations of visibility from the bedroom's outside to its inside. Visibility has a close

328

relationship with visual privacy, and according to the participants, the window affects their comfort with visual privacy. In addition, the view from within the bedroom to the exterior of the bedroom determines a second visual comfort factor. Participants argued that a pleasant view from the window can improve their mood and make their stay in ISH more enjoyable.
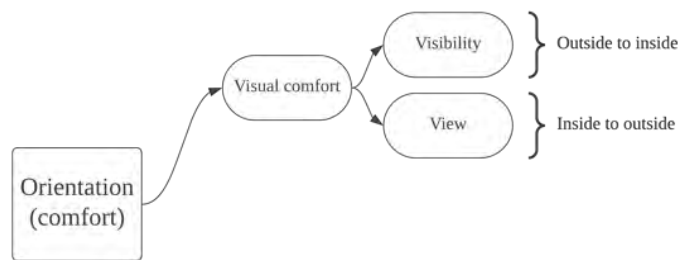
Figure 6.10 The Establishment of Orientation in Visual Comfort

- **Visibility**

The visibility in visual comfort has a close relation with privacy which preference of occupants in their bedroom window direction due to visual privacy. The window toward road or public space has a lower privacy than facing the opposite and it affects the visibility of bedroom from outside. In addition, the higher visibility from outside to inside the bedroom affecting the insecurity of occupants particularly when they are in the in-house attire. The female occupants have the highest insecurity of visibility from outside to inside the bedroom due to the awrah or uncovered body parts. In the other hand, male students reportedly have less issue with the visibility from outside the bedroom and relatively feel safe with the window. To come up the insecurity from the window, students covering the window with curtain or sticking papers on the window glass to block the view from outside.

- **View**

The good view to outside of the window attracts student in the bedroom selection. Whole students, male or female, reveal the interest of outside window view as their preference in the choice of bedroom. Bedroom window facing the good view can boost their spirit in morning before class and reduce their stress after class. Furthermore, the case of Islamic student housing of UNISSULA have the building near the seashore and offer a fascinating view during the sunset. Thus, the bedroom with window facing the seashore would be a most preferable choice of the occupants. Some Islamic student housings of the study also have no good view, but the choice of window view always be the most preference of the occupants. As simple as the greenery vegetation view would be a preference choice of window view for Islamic student housing

6.4.2. Natural Conditions

The natural conditions, which includes sun movement and wind, is the second component of orientation comfort. The natural conditions affecting the comfort of participants' bedrooms which determined by the building's orientation relative to the solar movement. In order to combat the window orientation that faces the intense sunlight, the participants utilise curtains and extra layers of glass to decrease glare and temperature transfer. Another factor influencing thermal comfort is the wind that helps to cool their bedroom through the window. Unfortunately, allowing wind into the bedroom through a window reduces their visibility from outside the bedroom. This case determined that the window design can deliver wind but at the expense of visual privacy.
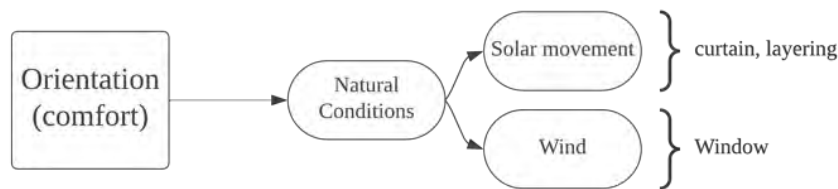
Figure 6.11 The Establishment of Orientation in Thermal Comfort

- **Solar Movement**

The sun orientation determines the comfort level of room temperature and preference of room choice for occupants. According to the participants, the room with window facing the east or west are not their preferable room due to the solar radiation that causing the increasing of room temperature. In the other hand, some participants tend to choose the bedroom with window facing the sun orientation because of sunlight. Some participants prefer facing the sunrise due to the ability of morning sunray boosts their spirit. Furthermore, some participants prefer the window facing the sunset for the sunset view preference. However, the window facing the sun movement requires them to layer the window to reduce the heat. The participants closed the curtain provided or installed additional layer with paper for the window without curtain.

- **Wind**

The inclusion of a window in the bedroom is an unavoidable consequence of the occupants' thermal comfort preferences, which dictate the ambient temperature. By directing airflow from the exterior into the bedroom, the window effectively mitigates the ambient temperature. Therefore, the window served as both an outer room view and a means of controlling airflow. Nevertheless, in the event that the occupants deemed the room inadequate in terms of thermal comfort, they also took along their personal fans.

6.4.3. Personal Comfort

The final aspect of orientation is personal comfort, which includes religious and culturally-based choices. The first personal comfort is decided by the Qibla orientation of the building. This Qibla orientation facilitates participants' arrangement of the space for prayers such as Sholat. The second source of personal comfort is the culture that incorporates their personal beliefs that are rooted in the customs of their distinct origin region. This culture includes a preference for buildings to face a specific wind direction or to avoid certain conditions. The following figure is the diagram of orientation aspect establishment among participants.
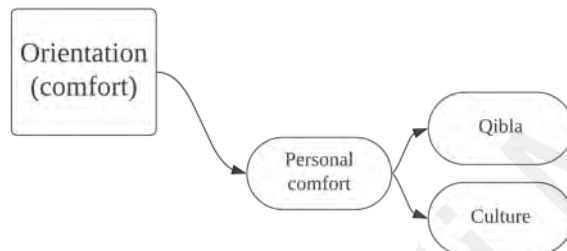
Figure 6.12 The Establishment of Orientation in Personal Comfort

- **Qibla**

Indonesia as the country with the most Moslem in the world put Qibla as the building direction as the most preferable housing direction. The preference of building direction to Qibla also became the preference of the building orientation of this study participants. The direction to Qibla believed by the participants as the embodiment of Islamic culture and to ease the building layout in terms of performing Shalat.

- **Culture**

Apart from Qibla, culture also the reason behind the building orientation preference. The heterogeneity of Indonesian that consist of races, tribe, and believes brings the diversity of culture, particularly in terms of housing orientation. The culture

332

that determines the housing orientation impacted by the natural entities such as sea, mountain, and traditions.

6.5. Re-examination to The Conceptual Framework

Before proposing the values of Islamic architecture in Islamic Student Housing, the earlier research flowchart in the Chapter 3 Methodology suggested that the final analysis of the study necessitate a re-examination of the conceptual framework. The designated Islamic student housings exhibit a strong locality-based Islamic architecture value, as indicated by the analysis. The re-examination was conducted to re-evaluate the previous concept of Islamic architecture values and to compare it to the results of the study, which encompassed a more comprehensive concept of Islamic architecture values. The researcher is also required to re-examine the previous theory before establishing the theory as the main result of the study, as grounded theory is the method employed in this study. Therefore, this subchapter is necessary for the theory's establishment in the concluding phase of the investigation.

6.5.1. The Value of Privacy

From the literature framework, the conceptual framework that was previously stated examined the physical and spatial agreement that established privacy in Indonesian houses. The purpose of the separator/divider, height adjustment for building elements, distinct zoning division, and space agreement is to protect women (mothers, wives, and daughters) from unlawful sight. Meanwhile, the wall's selected material is designed to reduce the risk of acoustic privacy breaches. Consequently, the design of layers of rooms as transitional spaces and distinction entrances is intended to serve as a barrier between the house owners and their guests. The primary objective of the privacy values in traditional Indonesian houses is to safeguard the women who reside there and to establish

333

an ethical standard that honours the house owner. The fundamental Indonesian characteristic of sociability is well conserved, despite the fact that traditional Indonesian houses are characterized by strict privacy. In other words, the purpose of maintaining privacy is to ensure that guests are received and treated respectfully without altering the sense of security that residents experience. The current housing design should not eliminate the prevalence of guest rooms in traditional Indonesian houses. Consequently, the Indonesian sociability character will be effectively preserved. In addition, the Islamic architectural concept is also consistent with the physical and non-physical privacy values that are incorporated in traditional Indonesian houses.

The data collected from Islamic student housing demonstrates that the establishment of privacy is customized to the behaviour of students and the circumstances of multiuser bedrooms. Not only female students, but also male students, require privacy in Islamic student housing. The establishment of privacy as the implication to secure their activity visually, acoustically, and to safeguard their belongings. Privacy is established among roommates through a variety of unique methods, including the spoken consent they give to their roommates when in need of privacy, in addition to physical and spatial agreements. The study also argues that privacy can be accomplished not only physically and spatially, but also verbally through the consent they communicated to their roommate. The re-examination of the privacy value between the conceptual framework and the study findings is illustrated in the subsequent figure.
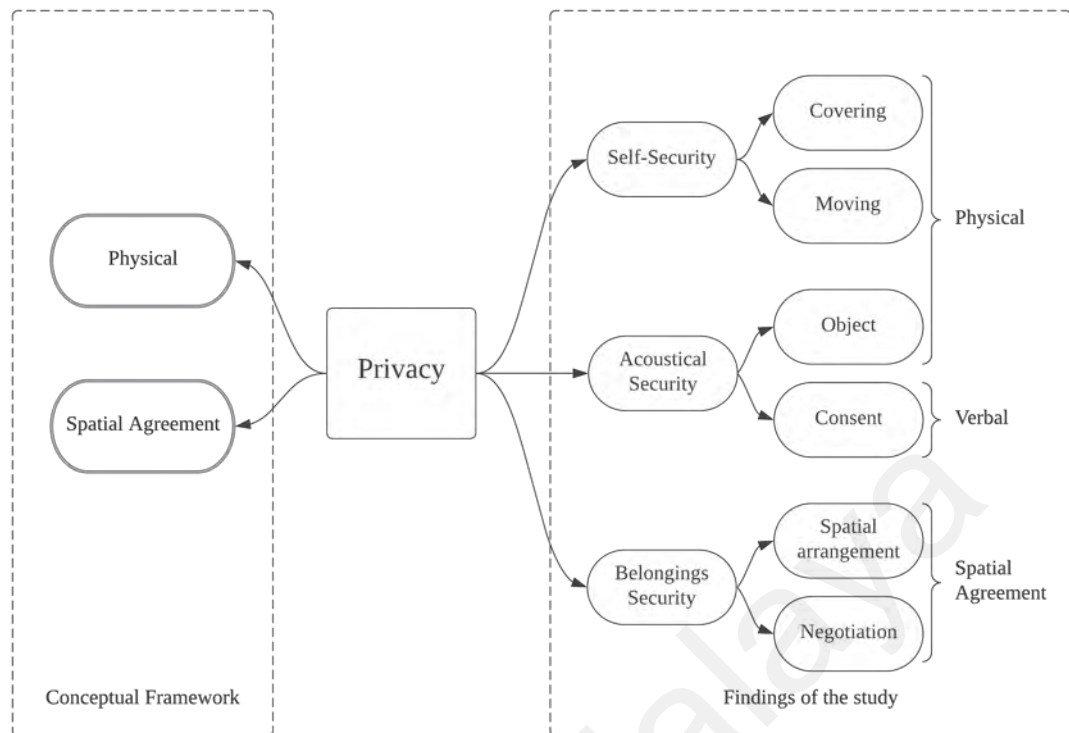
Figure 6.13 Re-examination of privacy value

6.5.2. The Value of Sociability

The acceptance of visitors by Indonesians is characterized by the sociability aspect of traditional Indonesian housing. Indonesians believed that guests were special individuals who were present in the home at a specific time and deserved the best treatment from the owner. The literature review appears to indicate that the sociability mechanism in traditional Indonesian houses had certain advantages, purposes, and meanings. The earthquake-resistant construction of traditional Indonesian dwellings is the distinctive discovery in the sociability mechanism. Additionally, certain spatial functions were modified to facilitate guests and promote sociability. The mechanism of sociability is also influenced by the social status of the visitors, particularly in terms of respecting the honorary status of their guests. The implementation of zoning is another sociability mechanism that ensures the privacy of the owner household and provides

335

adequate accommodations for visitors. Finally, the sociability mechanism is closely associated with gender-based and Islamic values, which are reflected in the spatial arrangements that safeguard and provide a suitable environment for women.

Staying in Islamic Student Housing (ISH) is a possible opportunity for students to acquire social skills, network, and develop relationships with roommates and housemates. Social aspects of ISH are established through spaces, activities, and rules based on its practice. Amenities are provided for both visitors and residents in spaces that foster social interaction. The activities of the occupants during their stay at ISH are the subsequent discoveries in sociability practices. Their bond is strengthened by their shared housing with companions of comparable age and their attendance at the same university. The study also discovered that rules are one of the sociability factors in Islamic student housing that can enhance the social connectedness among students, which is another unique finding. The students are disciplined and united with their roommates and classmates as a result of the written and unwritten rules that are enforced in Islamic student houses. The study argues that the conceptual framework's sociability aspect is entirely constructed differently. The sociability aspect of Islamic college housing is established by the typical multiuser bedroom user, which incorporates how students interact with other students through the spaces provided, activities they participate in, and rules they adhere to. The subsequent figure illustrates the re-examination of the sociability value in relation to the conceptual framework and the study findings.
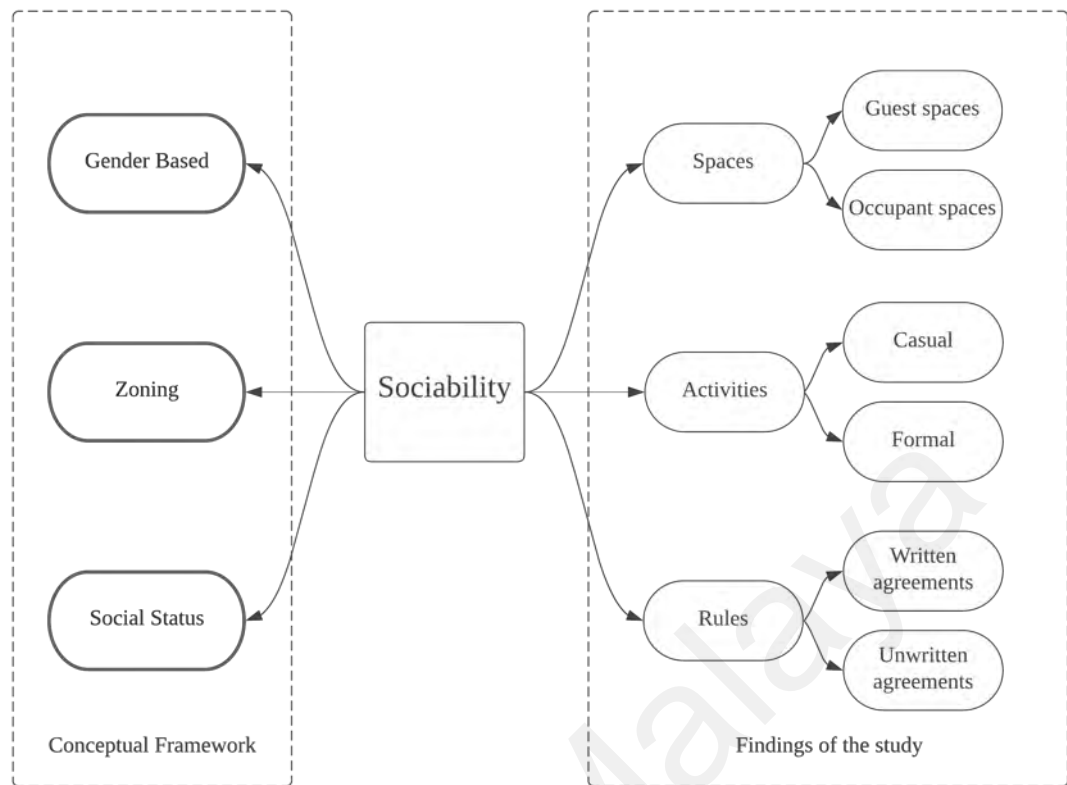
Figure 6.14 Re-examination of sociability value

6.5.3. The Value of Orientation

According to the literature review study, the diverse orientations of traditional Indonesian dwellings are determined by factors such as nature, main access, and belief. The 'nature' factor includes respecting natural characteristics, using wind for personal comfort, and avoiding excessive winds. The ancient Indonesians were farmers and fisherman, therefore the usage of natural resources had a significant impact on their life. Natural understanding was also one of their powers, allowing us to contemplate nature in order to avoid damage. The'main access' aspect simply refers to houses that are designed for easy access to movement, as is prevalent nowadays. Current residents employ this technique to angle their homes toward the road for practical design. The 'belief' factor

337

includes orientations based on ancestral beliefs, the placement of sacred areas, and the effect of Islamic Qiblah orientation. Animist and ancestral beliefs present in traditional Indonesian house culture are incorporated into current housing design. The spread of Islam in Indonesia established the importance of housing orientation toward the Qiblah.

The final aspect of inquiry regarding the participants' ISH experience is their building orientation expectations. Due to their temporary stay in ISH, participants cannot establish this aspect, but it is nonetheless expected. The orientation has a close relationship with their bedroom's comfort from and to external factors. In addition, the findings clarified the orientation part of ISH, which included the following comforts: visual, natural condition, and personal. Visual comfort is the visibility that has a close relationship with visual privacy, and according to the participants, the window affects their comfort with visual privacy. In addition, the view from within the bedroom to the exterior of the bedroom determines a second visual comfort factor. The natural conditions, which includes sun movement and wind, is the second component of orientation comfort. The natural conditions affecting the comfort of participants' bedrooms which determined by the building's orientation relative to the solar movement. The final aspect of orientation is personal comfort, which includes religious and culturally-based choices. The first personal comfort is decided by the Qibla orientation of the building. The study argues that the conceptual framework's orientation aspect is entirely constructed differently. The orientation aspect of Islamic college housing is established by the expectation of the occupants to their temporary residence, including visual comfort, natural condition, and personal comfort. The subsequent figure illustrates the re-examination of the orientation value in relation to the conceptual framework and the study findings.

6.6. Conclusion of Discussion

The discussion chapter includes two primary conclusions that address the two research questions presented: firstly, what are the current practices of Islamic architecture in Islamic student housings; and secondly, how to develop a framework for Islamic student housing in Indonesia using Islamic architecture values as an approach? The following subsections provide explanations for the solutions to each research question, taking from the Discussion chapter.

6.6.1. Current Practice of Islamic Architecture in The Selected Islamic Student Housings

In the selected Islamic student housings, the principles of Islamic architecture have been implemented into the establishment of privacy, sociability and building orientation. The principle of **privacy** is fundamental to Islamic architecture and is manifested in the following practices: self-security, which entails covering their bodies and moving when changing clothes; acoustical security, which involves the use of objects and indicating consent during phone calls or online meetings; and belonging security, which entails spatial arrangement and negotiation concerning personal zoning and storage. Moreover, the **sociability** principle in Islamic architecture functions to strengthen the bonds between individuals as Allah's creations. This principle is demonstrated in the selected Islamic student housings through the provision of common spaces for socialising, the organisation of informal or formal activities to facilitate interaction among occupants, and obedience to regulations as a means of teaching the value of mutual sharing. In finality, the selected research case objects illustrate how the principle of building **orientation** in Islamic architecture is applied: to ensure visual privacy, to minimise

resource wastage through thermal comfort, and to promote personal comfort in accordance with Islamic cultural norms concerning Qibla as the direction of buildings.

6.6.2. Developing The Framework of Islamic Student Housing Design with Islamic Architecture Values Approach

The research argues that in order to ensure the integrity of Islamic student housing, its framework should undoubtedly integrate locally developed Islamic architecture that reflects the occupants' culture. Subsequently, the design guidelines outlined in the preceding paragraph concerning the present implementation of Islamic architecture in student housing developed as follows:

- Privacy

In order to meet the previously mentioned privacy objectives, Islamic student housings are typically furnished with simple changing rooms separated by curtains, as well as toilet facilities positioned not only in the building's corners but also in the centre for convenience. A quiet communal study room is also suggested for those who require acoustic privacy during an online meeting or phone conversation. Furthermore, in order to promote a feeling of security regarding personal belongings, it is recommended that the management of the student housing provide each occupant with a lockable storage unit and establish distinct zoning in the bedroom to prevent conflicts among roommates.

- Sociability

The sociability aspects ensure that guests are accommodated in an appropriate way while maintaining the privacy of the occupants. Therefore, in order to facilitate sociability when receiving guests, it is necessary to have a designated guest room located near the main entrance to shield the interior of the student housing from potential privacy breaches. An area outside the bedroom may also be utilised to accommodate the

340

sociability while prevent the privacy of roommates. Management should demonstrate recognition of the casual and formal activities of the occupants by allocating suitable areas to accommodate such activities. Finally, it is noteworthy that the implementation of both written and unwritten rules promotes social interaction among residents of Islamic student housing.

- Orientation

The orientation aspects that were examined in this study to determine how students anticipated their window and the orientation of the building revealed that the position of the window could result in a violation of visual privacy. Therefore, into considerations of thermal comfort and visual privacy, window design should prioritise functionality as a ventilation device while preserving visual privacy. In addition, during the planning phase of student housing development, the site and site plan should be selected with care to provide the best possible view from the building, take thermal comfort into consideration, and adhere to Islamic tradition regarding the Qibla direction.

CHAPTER 7 DESIGN FRAMEWORK OF ISLAMIC STUDENT HOUSING

7.1. Introduction

This chapter discusses the design framework for future Islamic student housing in Indonesia based on the study conducted and written on the previous chapter. In this chapter, the discussion of privacy, sociability, and building orientation will be comprehensively established based on participants experiences. The participants' need of privacy based on the study be reflected on the framework design for future design of

Islamic student housing that understands the privacy and ensure the security. The demands of sociability aspects through the activities and spaces provided will be encouraged to be encouraged more accommodated spaces in order to foster the sociability among students. The participants' understanding in building orientation will be additional enriching insight in terms of ensuring visual privacy and providing comfort to the occupants.

7.2. The Implication of Study to The Future Design of Islamic Student Housing

The aforementioned finds of the study concerning the application of privacy, the implementation of sociability, and the preference towards building orientation serve as the foundation for the prospective architectural plan concerning Islamic student housing in Indonesia. The present findings were derived from the participants' observations and focus group discussions in seven Islamic student housing complexes; they were also deemed to be representative of the gender diversity of the residents. Anticipatedly, the framework derived from the findings will serve as the foundational design principles for improved Islamic student housing, taking into account both user and Islamic values in the local context. The implementation of design principles from this study including the values of privacy, sociability, and orientation.

7.2.1. The Implementation of Privacy

The study discovered that privacy is the most important factor in this research and that occupants of Islamic student housing have an enormous need for privacy, as it may be their first time living away from family in a multi-user bedroom. Additionally, privacy determines comfort while residing in student housing. The preserved privacy ensures a sense of security for both physical and non-physical entities. Physical entities include their body when they change clothes, their belongings when they store them, and their

342

zoning when they share a bedroom with roommates. Furthermore, non-physical entities, such as their unheard voice during phone calls and their roommates' voices during online meetings. Hence the implementation of privacy based on the study as the diagram follows:
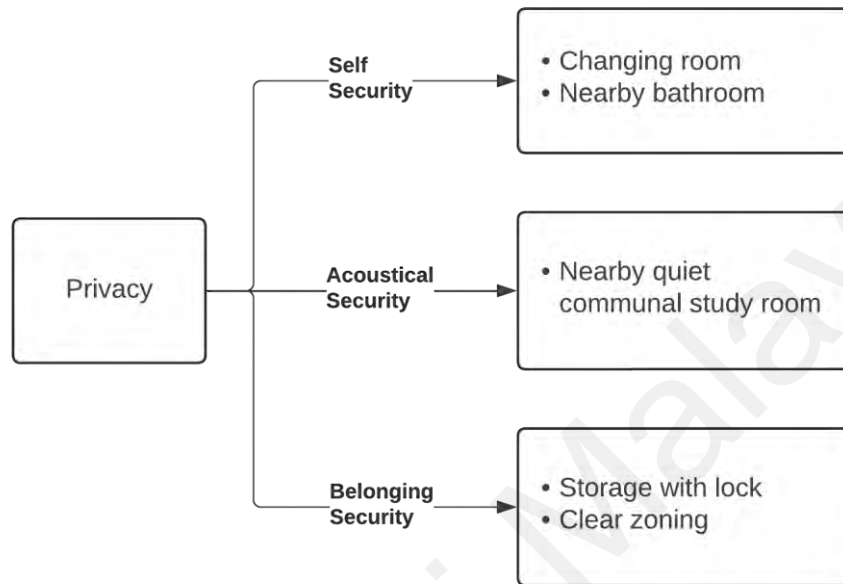
Figure 7.1 The implementation of privacy to the design

7.2.1.1. Self Security in Privacy

In regards to visual privacy concerns, the majority of students claim that having a changing room inside their bedroom is advantageous, especially when it comes to changing clothes. The bedrooms of the seven Islamic student housings examined in this study lacked a changing room. To ensure their privacy while changing clothing, the students utilised to moving to the bathroom, hiding behind objects, or wearing prayer attire. The present study posits that occupants have an extreme need for a changing room, such as a fitting room with a curtain, in each room. Otherwise, the restroom should be positioned in the centre of the student housing layout. As of now, the bathroom facilities in student housing have been situated in the corner of the buildings, which significantly

343

distances the middle bedroom from the bathroom, which is primarily utilised for changing clothes.

7.2.1.2.   Acoustical Security in Privacy

Participants rank acoustic privacy as the second most important aspect of privacy. This pertains to the level of seclusion they require when engaging in private conversations via phone call or online meeting. As of now, students utilise earphones for the purpose of reducing noise during online meetings and preventing eavesdropping during phone calls. The participants argue whether they will request their housemates to maintain silence while they use the devices to communicate. Additionally, the research proposes that student housing could benefit from a designated communal study area for those who prefer to use headphones or earphones in silence. A silent study area can provide students with the acoustic privacy they require in comfort. In student housing, the silent study room can be enclosed completely with acoustical wall coverings.

7.2.1.3.   Belonging Security in Privacy

Belonging security constitutes the remaining privacy value to be established within the framework of future Islamic student housing design research. An additional necessity for individuals who are away from home is to feel safe when they leave from their belongings in the multi-user dormitory. The majority of the student housings included in this research have private storage for residents; however, some of these units lacks a key. As a result, residents of that student housing experience a diminished sense of security when it comes to retrieving their belongings as they vacate the premises. Therefore, the research indicates that student housing management should furnish residents with lockable storage units that are sufficient to protect their privacy and

facilitate the maintenance of a tidy bedroom. Additionally, the study proposes that the bedroom should be plainly partitioned according to the space of each occupant. By delineating the tile with a coloured line, for instance, each space user's designated area could be specified. As a result, the occupants comprehend the zoning and designate the space to reflect both their private and communal zones. Additionally, explicit zoning instructs students on space management, including sharing and respecting the space of others.

7.2.2. The Implementation of Sociability

The research findings indicate that sociability is a significant factor in determining the effectiveness of student housing as a learning environment for students to develop skills in sharing, networking, and socialising. Undoubtedly, the level of successful sociability demonstrated by individuals is dependent upon the spatial amenities provided. Furthermore, it is essential that the available space be optimised through the implementation of activities that foster stronger social connections among students. This study identified a distinctive implementation of sociability in Islamic student housings, which included not only a designated area for socialising but also agreements between residents that were either created by the students themselves or established by the management. The embodiment of a sociability component within the research, which could potentially be applied to forthcoming Islamic student housing, is depicted in the figure below.
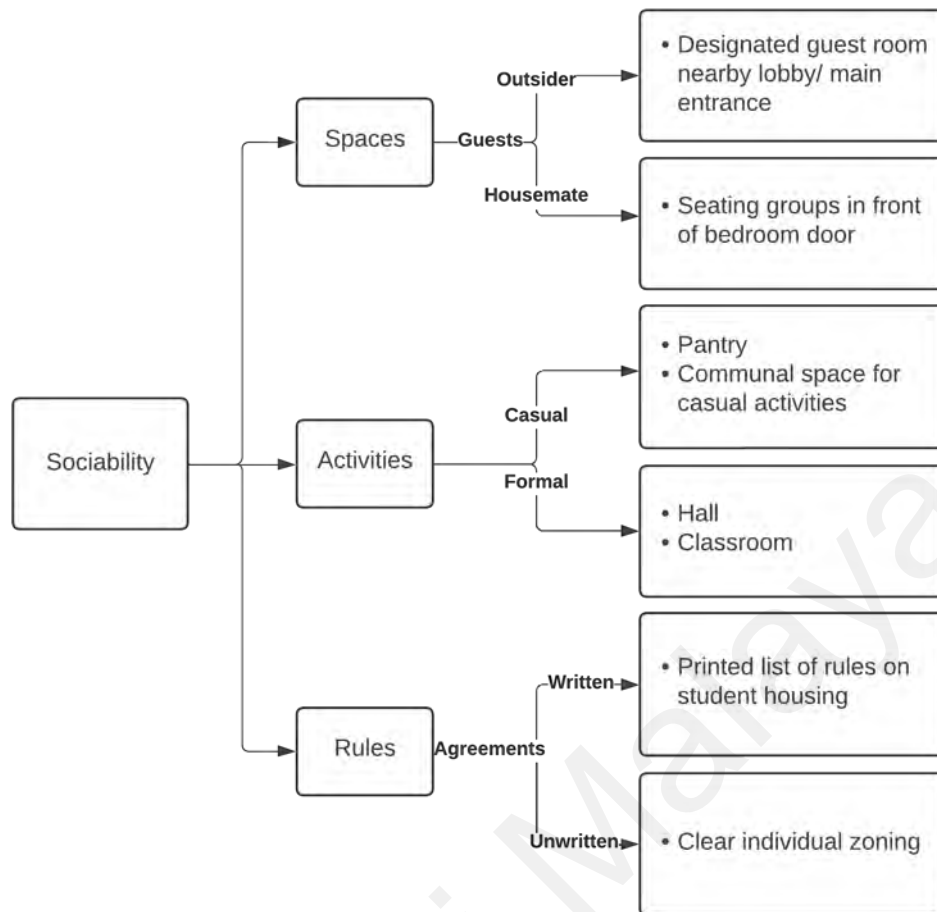
Figure 7.2 The implementation of sociability to the design

7.2.2.1. Spaces in Sociability

Space should be designated for social interaction and partitioned according to the category of visitors. In order to gather with the occupants of the student housing, an appropriate area should be made available for the outsider or non-occupant. The external guest may consist of a classmate, a friend, a member of the occupants' family, or a relative. In student housing, the provision of space for outsiders is crucial for preventing the breach of privacy of other residents. The designated guest room for outsiders should be located in close proximity to the main entrance and be completely isolated from the interior areas of the student housing. Consequently, the unwanted guest was unable to

observe the contents of the building, resulting in a violation of the visual privacy of a fellow housemate.

Additionally, in order to protect the privacy of the roommate, a designated receiving housemate should be placed in front of the bedroom door for guests arriving from other rooms or the house. Located along the corridor in front of the room, which was occasionally designated as a shoe storage area and served as an entrance to the bedroom. As a seating area, only one of the seven student housing units examined in this research provides tables and chairs in front of the dormitory door. In contrast, other student housing complexes utilised that corridor as an entrance with no seating. This straightforward yet significant design may also promote networking among residents of student housing while maintaining the privacy of their bedrooms.

7.2.2.2.   Activities in Sociability

It is anticipated that the available spaces will be utilised for productive endeavours, which undoubtedly promotes social interaction among Islamic student housing those living there. The research reveals that students participate in both formal and informal activities while residing in student housing. Formal activities are those supervised by the institution or student housing management whereas informal activities are those performed among housemates independently. Formal activities demonstrate that a hall is absolutely necessary to accommodate every student housing resident during an event. Additionally, the research reveals that certain amenities may be supplemented to cater to the interests or needs of the students, such as a pantry where they can gather with their roommates during meals or prepare meals. An additional communal space determined that it was crucial to provide space for these social activities—gaming, watching films, and interacting with other housemates.

347

7.2.2.3.   **Rules in Sociability**

The function of the rules in student housing extends beyond mere student discipline; instead, they fosters social interaction among residents of Islamic student housings, according to the study. By default of being established by the management or through agreements between companions and housemates, the regulations inevitably instruct the students in the values of cooperation and social interaction. The regulations may be prominently displayed or printed in prominent places within the student housing complex. Moreover, the written regulations, which students attach their signatures to upon enrolling in the student housing, serve as the declaration of compliance. In addition, through the informal agreement they have reached, students indirectly learn to respect, cooperate, and socialise through the establishment of their own rules among roommates. The informal agreement comprises unspoken regulations that are established among housemates, including the distribution of furniture and equipment, as well as the determination of personal and shared sleeping areas in the bedroom. Students adapt to these implicit agreements in a particular way, and the operation of the informal agreement also strengthens their bonds. However, this may also lead to conflicts among occupants due to misunderstandings and an inequitable distribution of space and amenities. As a result, the study recommends that zoning, furniture, and equipment be clearly distributed between rooms and users in order to prevent conflicts, despite the fact that students will ultimately reach their own resolutions and agreements.

7.2.3. **The Implementation of Orientation**

Although the orientation of the building was outside the control of the occupants, this should serve as an illustration of caution for the future development of Islamic student

housing that incorporates local values. The results obtained from this research suggested that certain aspects pertaining to the orientation of the student housings were influenced by the participants. The occupants' preferences and privacy-related aspects of building orientation, as determined by their experiences during their time in student housing. The subsequent figure illustrates the building orientation elements identified in the research that could potentially be incorporated into the design of Islamic student housing in the future.
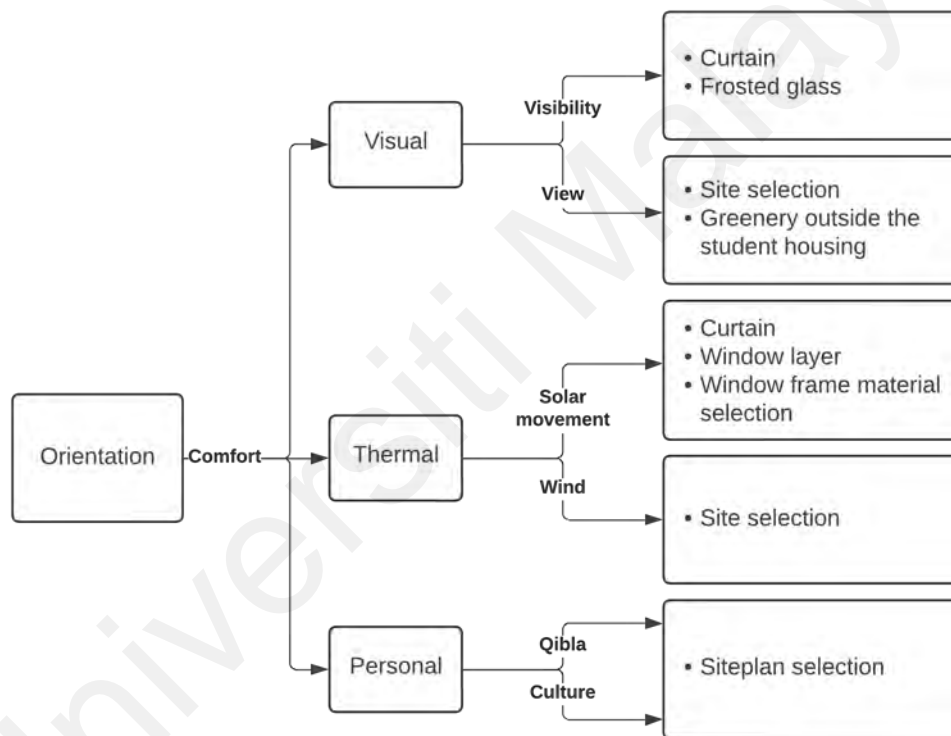
Figure 7.3 The implementation of orientation to the design

7.2.3.1.   Visual in Building Orientation

This aspect of building orientation is most closely associated with privacy, specifically visual privacy, as it allows for the outside of the student housing building to see inside the bedroom through the window. Particularly the female participants, their

window-facing bedrooms that face the student accommodation complex or university common areas make them feel less secure. For this reason, each window in the student housing was fitted with a curtain in order to protect the students' privacy from the outdoors. In this instance, a solution that could be applied to the design of Islamic student housing in the future would be to always install windows with frosted glass or curtains to obscure outside visibility.

Furthermore, the exterior view from the window influences the level of comfort that residents experience while residing in the student housing. One participant claims that a bedroom with an attractive view of the outdoors can serve to elevate one's mood prior to classes and alleviate tension. A more cautious approach to site selection could be incorporated into the planning phase of student housing complex development as a result of this case. The location of the student housing complex has a significant impact on the comfort level of the residents, which may be the deciding factor in their preference for on-campus accommodation over off-campus alternatives.

7.2.3.2. Natural Condition in Building Orientation

The present situation in terms of natural condition, which is influenced by solar movement, is also one that students cannot dispute. Furthermore, students are assigned rooms based on the availability of slots or at random. Therefore, someone whose window is directly exposed to sunlight would be inclined to shield it with a fabric or curtain in order to mitigate the impact of solar radiation. By conducting a thorough site selection process, future developments of student housing could potentially draw lessons from this situation. Shifting the orientation of the majority of windows on the building's western side towards the north or south in order to prevent solar gain. Furthermore, the window

frames and materials can be enhanced by substituting aluminium with UPVC and employing special radiation-reducing glass, respectively.

Considerable attention to site selection was also given to wind conditions in order to ensure the thermal comfort of students during their stays in housing. Additionally, student housing situated in areas with higher temperatures, such as downtown or near the coast, benefits greatly from wind to reduce heat accumulation in the bedrooms. This is evident from the participants' responses regarding window orientation: they prefer windows that face the breeze. Wind considerations also impact the electricity consumption of air conditioners and fans.

7.2.3.3. Personal Reason in Building Orientation

The findings of this study indicated that the participants held an opinion that the building's orientation towards the Qibla was advantageous. Furthermore, they hold the opinion that the Islamic educational establishment where they are enrolled should operationalize the Islamic cultural principle of building orientation towards the Qibla. Nevertheless, not every dormitory included in this research possesses a building that faces the Qibla. In fact, the building's orientation towards the Qibla may facilitate worship for its occupants, particularly when they are performing Sholat. The orientation of the building can be modified to align with the Qibla, allowing for adjustments to be made to the layout, including the positioning of bathrooms closet to avoid facing or turning away from the Qibla. As a result, this study demonstrates that Qibla can serve as a guiding principle for site plan development in relation to building orientation.

Separately from that, certain study participants influenced the orientation of the building in accordance with their culture. Moreover, as culturally diverse Indonesian students, the perceived orientation of building is a significant aspect of their existence.

The orientation of their buildings is influenced by the cultural values of the local community, which may require them to face a particular axis or prevent a particular facing direction. Undoubtedly, facing directions in accordance with local values can be implemented in Islamic architecture with the bare minimum and without violating Islamic principles. Aside from that, local values and building orientation can be incorporated into Islamic architecture so that buildings appear harmonious with their surroundings and discourage the acceptance of teachings contrary to Islamic principles.

7.3. The Design Framework of An Islamic Student Housing

The study suggests a design arrangement that takes into consideration the following Islamic architectural values: privacy, sociability, and orientation. The proposed design is based on the students' viewpoints via FGD or the researchers' analysis via a combination of FGD and observation. The bedroom design has had the most impact on the remodelling because students spend the majority of their time in Islamic student housing. The bedroom provided a design that considered both privacy, sociability, and orientation. Privacy values include the arrangement of the bedroom design, sociability includes the space that accommodates socialization between roommates and housemates, and finally orientation emphasizing in the window design to satisfy the visual comfort and natural conditions.

7.3.1. The Design Framework for Privacy

The proposed design for privacy involving the most occurring issues between the participants in the bedroom, which may be granted by Islamic Student Housing (ISH) managements or developers. The privacy issues include self-security, which includes

352

visual privacy when staying in the multiuser bedroom, as well as belonging security, which takes into account the secure feeling when leaving belongings in the multiuser bedroom. Therefore, the privacy of an ISH can be established by the supplementary layer that conceals the entities' appearance. In addition to concealing, the additional layers may also reduce the connection between spaces, thereby establishing a seclusion space and a sense of security for the occupants.

This study can be established not only by the existence of physical barrier, but the

7.3.2. The Design framework for Sociability

Sociability is a critical component of Islamic architecture that facilitates social connections among individuals. The unique findings that can be established as a design framework for future Islamic student houses (ISHs) include the presence of sociability spaces in the selected ISHs, such as a guest room to receive visitors, a hall to conduct activities, and rules that indirectly create a bond between students. The presence of a guest room indicates that the categorized space can be used to establish sociability while respecting the privacy of others. Additionally, the presence of a hall as a multipurpose space for activities suggests that the study's prospective findings of a spacious space to accommodate the members of the house can be adapted for the ISH's design framework. Finally, the rules that can establish sociability are a unique discovery that emerged from the students' bonding, which provides an additional connection between members through the agreements they establish.

7.3.3. The Design framework for Orientation

The building orientation is an aspect among other aspects that students had to deal without any choice because they reside in the Islamic Student Housing (ISH) for

temporary. Hence, they have adaptation and found some issues in the building orientation, particularly their window bedroom. The orientation is closely related to the outside building condition which beneficial and harm for students. The beneficial of outside condition such as the scenic view from window that can be enjoyed by students. While the harm condition of the outside condition is the possibility of privacy breach from the window bedroom and the intense sun light during the day. Hence, this study argues that the building or window orientation is a need of a connection between inside and outside of the building in particular condition, which might need a barrier to maintain the personal needs of the user.

CHAPTER 8 CONCLUSION

The research findings are discussed in earlier chapter in the context of locality aspect of the occupants to the selected Islamic student housings that can be developed as basis for the design framework of future Islamic student housing, particularly in Indonesia. This final chapter summarises the study's findings and contribution to the research objectives. The limitation of this research to specific case study shows the potentials to be expanded for further research design of Islamic student housings.

8.1. Introduction

The earlier discussion in Chapter 6 have answered the research question outlined in Chapter 1. This section summarises the findings concerning the research questions.

RQ1. What is the Islamic architecture values with the Indonesian spatial approach in housing?

Summary: The results of this research reveal that locality values in traditional Indonesian dwellings offer three characteristics that are especially noteworthy. The following characteristics are included: **privacy, sociability, and orientation**.

RQ2. How is the current practices of Islamic architecture in Islamic student housing dwellers of selected research locations?

Summary : In the selected Islamic student housings, the principles of Islamic architecture have been implemented into the establishment of privacy, sociability and building orientation. The principle of **privacy** is fundamental to Islamic architecture and is

manifested in the following practices: self-security, which entails covering their bodies and moving when changing clothes; acoustical security, which involves the use of objects and indicating consent during phone calls or online meetings; and belonging security, which entails spatial arrangement and negotiation concerning personal zoning and storage. Moreover, the **sociability** principle in Islamic architecture functions to strengthen the bonds between individuals as Allah's creations. This principle is demonstrated in the selected Islamic student housings through the provision of common spaces for socialising, the organisation of informal or formal activities to facilitate interaction among occupants, and obedience to regulations as a means of teaching the value of mutual sharing. In finality, the selected research case objects illustrate how the principle of building **orientation** in Islamic architecture is applied: to ensure visual privacy, to minimise resource wastage through thermal comfort, and to promote personal comfort in accordance with Islamic cultural norms concerning Qibla as the direction of buildings.

RQ3. How to develop framework the design framework of Islamic student housing in Indonesia based on Islamic architecture values?

Summary : The research argues that in order to ensure the integrity of Islamic student housing, the design framework should undoubtedly integrate locally developed Islamic architecture that reflects the occupants' culture. Subsequently, the design guidelines outlined in the preceding paragraph concerning the present implementation of Islamic architecture in student housing developed as follows:

- **Privacy**

In order to meet the previously mentioned privacy objectives, Islamic student housings are typically furnished with simple changing rooms separated by curtains, as well as toilet facilities positioned not only in the building's corners but also in the centre

for convenience. A quiet communal study room is also suggested for those who require acoustic privacy during an online meeting or phone conversation. Furthermore, in order to promote a feeling of security regarding personal belongings, it is recommended that the management of the student housing provide each occupant with a lockable storage unit and establish distinct zoning in the bedroom to prevent conflicts among roommates.

- **Sociability**

The sociability aspects ensure that guests are accommodated in an appropriate way while maintaining the privacy of the occupants. Therefore, in order to facilitate sociability when receiving guests, it is necessary to have a designated guest room located near the main entrance to shield the interior of the student housing from potential privacy breaches. An area outside the bedroom may also be utilised to accommodate the sociability while prevent the privacy of roommates. Management should demonstrate recognition of the casual and formal activities of the occupants by allocating suitable areas to accommodate such activities. Finally, it is noteworthy that the implementation of both written and unwritten rules promotes social interaction among residents of Islamic student housing.

- **Orientation**

The orientation aspects that were examined in this study to determine how students anticipated their window and the orientation of the building revealed that the position of the window could result in a violation of visual privacy. Therefore, into considerations of thermal comfort and visual privacy, window design should prioritise functionality as a ventilation device while preserving visual privacy. In addition, during the planning phase of student housing development, the site and site plan should be selected with care to provide the best possible view from the building, take thermal comfort into consideration, and adhere to Islamic tradition regarding the Qibla direction.

8.2. Scientific Contribution

In the earlier Chapter 1, the study proposed some significant contributions to for the future research theoretically or practically. In academic realm, this study contributes in the research design method and theory, particularly in Islamic architecture.

8.2.1. Theoretical Contribution

An established understanding of Islamic architecture that has mainly focused on its implementation in Islamic student housing, in alignment with the local values of Indonesian dwellings. The functional Islamic architecture adheres to the principle of universality, permitting its implementation in any location in accordance with local customs, culture, and behaviour provided that sharia law is not violated. The universality inherent in Islamic architecture serves as the foundation for an investigation into the values associated with housing in Indonesia, which is the focus of the research and data collection process. Furthermore, the literature review study unveiled that privacy, sociability, and orientation are three facets of Indonesian housing values.

To accomplish the aims of this study, the research methodology employed is Grounded Theory. Grounded theory is a deductive approach that exclusively utilises Focus Group Discussions (FGD) to gather data from participants, which is subsequently analysed in order to derive research findings. To stay on task with the research, a literature assessment was conducted beforehand in order to identify research themes that would serve as point of reference during the FGD. Subsequently, field observations were conducted in order to validate the participants' viewpoints and enhance the overall validity of the research.

8.2.2. Practical Contribution

The study's practical implications for the application of Islamic architecture in Islamic student housing constitute its contribution to the actual world of architecture. Focus group discussions (FGDs) and observation at specific locations are imperative in order to gain an initial understanding of the manner in which Islamic values are presently implemented in Islamic student accommodation. The investigation focuses on Islamic architectural principles, specifically examining privacy, sociability, and building orientation, in accordance with local values. Analysis of focus group discussions (FGDs) and observation essentially serve as the foundation for developing an Islamic architectural framework that will enhance prospective Islamic student housing. The following diagram is the framework of the study.
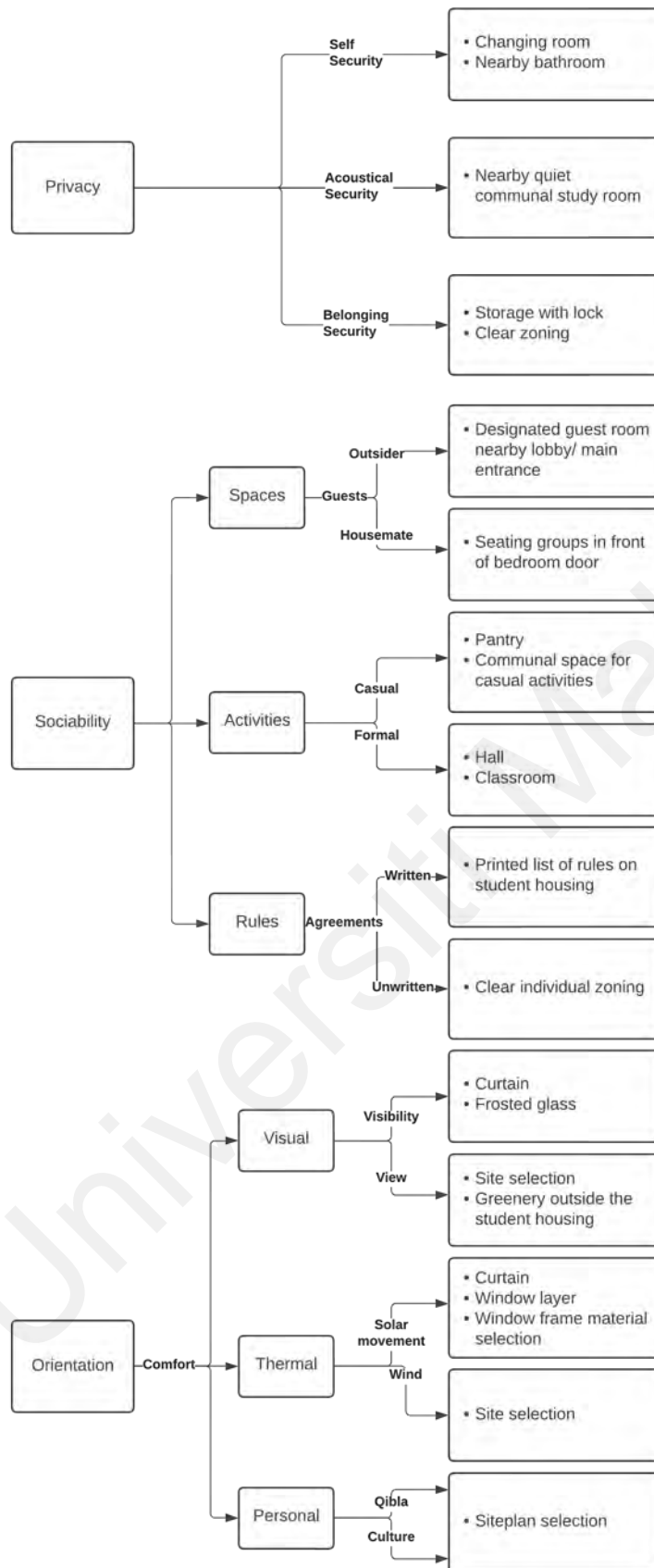
Figure 8.1 Framework for the improvement future Islamic student housings

8.3. Limitation of The Research

This section provides a description of the limitations that were encountered throughout the research process, including the execution of Focus Group Discussions (FGDs) and site observation. Several limitations were encountered during the data collection phase of this investigation via FGDs and observation. Participation in the FGDs is restricted to senior citizens (students) who are available, and their jam-packed college schedules diminish enthusiasm for this research. Male visitors to the female Islamic student housing are also prohibited from entering the building. Although participant and site observation provided limited data, the data collection procedure for FGDs was structured in accordance with the students' schedules and consisted of multiple phases. The investigation of the female student accommodation unit was additionally supported by residents, who were instructed by the researchers to take pictures of the area under observation.

8.4. Recommendation for The Further Research

This research has limited attention, and is of critical importance for the development of quality student housing on university campuses. Given the scope of this study, which is the application of Islamic architecture to student dormitories at Islamic universities, further investigation is required regarding conventional or non-Islamic university campuses. Aside from that, it is advisable that the dormitory management work in close collaboration with this type of research so that they can effectively mobilise their students to generate the greatest possible research results and have a substantial impact on the dormitory's improvement.

REFERENCES

Abdullah, A. (2017). Islam As A Cultural Capital In Indonesia And The Malay World: A Convergence of Islamic Studies, Social Sciences and Humanities. *Journal Of Indonesian Islam*, *11*(2), 307. https://doi.org/10.15642/JIIS.2017.11.2.307-328

Abdullahi, B. C., & Wan Abd Aziz, W. N. A. (2017). Pragmatic Housing Policy In The Quest For Low-Income Group Housing Delivery In Malaysia | Journal of Design and Built Environment. *Journal of Design and Built Environment*, *8*(1).

Abidah, A. (2017, March 11). Symbols of Social Strata Border in Traditional House Architecture (Case Study: Saoradja Lapinceng and Banua). *Proceedings of the 2nd International Conference on Education, Science, and Technology (ICEST 2017)*. https://doi.org/10.2991/icest-17.2017.74

Adisa, S., & Simpeh, F. (2021). A comparative analysis of student housing security measures. *IOP Conference Series: Earth and Environmental Science*, *654*(1), 012017. https://doi.org/10.1088/1755-1315/654/1/012017

Adu-Gyamfi, A., Poku-Boansi, M., & Cobbinah, P. B. (2020). Homeownership aspirations: drawing on the experiences of renters and landlords in a deregulated private rental sector. *International Journal of Housing Policy*, *20*(3), 417–446. https://doi.org/10.1080/19491247.2019.1669424

Agustina, V. (2017). A comparative study: The spatial organization of pre and post disaster house in traditional cultured area; study case: Core house project in Kasongan, Yogyakarta, Indonesia. *Proceeding Of 3rd International Conference On Construction And Building Engineering (ICONBUILD 2017)*, 080005. https://doi.org/10.1063/1.5011593

AlKhateeb, M., & Peterson, H. (2021). The impact of COVID-19 on perceptions of home and house design in Saudi Arabia. *Strategic Design Research Journal*, *14*(1), 327–338. https://doi.org/10.4013/sdrj.2021.141.27

AL-Mohannadi, A., Furlan, R., & Major, M. D. (2020). A cultural heritage framework for preserving Qatari vernacular domestic architecture. *Sustainability (Switzerland)*, *12*(18). https://doi.org/10.3390/SU12187295

Al-Mohannadi, A. S., & Furlan, R. (2022). The syntax of the Qatari traditional house: privacy, gender segregation and hospitality constructing Qatar architectural identity. *Journal of Asian Architecture and Building Engineering*, *21*(2), 263–283. https://doi.org/10.1080/13467581.2020.1869555

Alomari, H., & Alqimaqche, N. T. (2013, April 28). Sustainable Architecture Through Islamic Perspective: A Case Study In Old Mosul Residence Area, A case study in old Mosul residence area. *Proceeding of International and Middle East Conference on Sustainability and Human Development*. https://www.researchgate.net/publication/329070900_Sustainable_Architecture_Through_Islamic_Perspective_A_Case_Study_In_Old_Mosul_Residence_Area

Al-Qaradawy, Y. (1995). *Introduction To Islam*. Islamic Inc. Publising & Distribution.

Anwar, W. F. F. (2019). The Building Performance of Limas House; Dealing with Current Context. *Journal of Physics: Conference Series*. https://doi.org/10.1088/1742-6596/1198/8/082029

Arisandi, Y., Anwar, C., Salni, Purnama, D. H., Novrikasari, & Ghiffari, A. (2018). The Dominant Factors of Scabies Incidence in Two Islamic Boarding School Students, South Sumatera, Indonesia. *E3S Web of Conferences*, *68*, 01018. https://doi.org/10.1051/e3sconf/20186801018

ashadi, ashadi. (2021). Menara Kudus: Is It A Minaret Or A Temple? A Study Of Architectural Acculturation. *Journal of Islamic Architecture*, *6*(3), 178–186. https://doi.org/10.18860/jia.v6i3.9856

Asriningpuri, H. (2020). The sustainable built environment maintained by the Betawian traditional house's faithfulness in local wisdom. *IOP Conference Series: Earth and Environmental Science*. https://doi.org/10.1088/1755-1315/402/1/012004

Asrohah, H., Uin, |, Ampel Surabaya -Indonesia, S., & Idayatni, S. (2020). In Search For Gender Equality In Rural Madrasas Of Malang Raya. *Journal Of Indonesian Islam*, *14*(2), 387–406. https://doi.org/10.15642/JIIS.2020.14.2.387-406

Atmodiwirjo, P., & Yatmo, Y. A. (2021). Urban Interiority : Emerging Cultural and Spatial Practices. *INTERIORITY*, *4*(1), 1–4. https://doi.org/10.7454/in.v4i1.131

Attia, A. S. (2021). Traditional Islamic House (Ottoman House) Architecture, in Old Fatimid Cairo and Rosetta Cities, Egypt - An Example of Sustainable Architecture. *International Journal of Sustainable Development and Planning*, *16*(8), 1509–1517. https://doi.org/10.18280/ijsdp.160812

Attia, S., Alphonsine, P., Amer, M., & Ruellan, G. (2020). Towards a European rating system for sustainable student housing: Key performance indicators (KPIs) and a multi-criteria assessment approach. *Environmental and Sustainability Indicators*, *7*. https://doi.org/10.1016/j.indic.2020.100052

Aulia, D. N., & Syafikri, A. R. (2020). Adaptation Of Muslim Family Activity In Occupying Minimalist Contemporary Architectural Housing Design. *Journal of Islamic Architecture*, *6*(2), 77–82. https://doi.org/10.18860/jia.v6i2.8259

Awal, S. I. (2022). Finding a Balance between Public and Private Spaces in Student Housing Design in Thailand. *Nakhara: Journal of Environmental Design and Planning*, *21*(1). https://doi.org/10.54028/NJ202221201

Babangida, H., & Katsina, H. S. (2018). Integrating Islamic Design Principles For Achieving Family Privacy In Residential Architecture. *Journal of Islamic Architecture*, *5*(1), 9. https://doi.org/10.18860/jia.v5i1.4407

Bahar, Moh. A. (2012). Evaluasi Terhadap Aspek Kebersihan Dan Kesucian Dalam Perancangan Arsitektur Masjid. *Journal of Islamic Architecture*, *2*(1). https://doi.org/10.18860/jia.v2i1.2105

Baharudin, N. A., & Ismail, A. S. (2016). Architectural Style of Da'wah Mosque in Malaysia: from Vernacular to Modern Structures. *International Journal of Built Environment and Sustainability*. https://doi.org/10.11113/ijbes.v3.n2.122

Bakri, M. (2018). Sustainable Architecture Implementation Of Vernacular Mosque In Aceh, Indonesia. *Journal of Islamic Architecture*, *5*(2), 83–95. https://doi.org/10.18860/jia.v5i2.4812

Bakri, M. (2021). ECO-PESANTREN ASSESSMENT STUDY OF ISLAMIC BOARDING SCHOOL IN BANDA ACEH, INDONESIA. *Journal of Islamic Architecture*, *6*(3), 143–150. https://ejournal.uin-malang.ac.id/index.php/JIA/article/view/7967

Baskara, B. (2020). The expansion of jama'ah tabligh movement and its influence on the religious belief of the bajo people in south east sulawesi. *Journal Of Indonesian Islam*, *14*(2), 519–540. https://doi.org/10.15642/JIIS.2020.14.2.519-540

Bergquist, D., Hempel, C. A., & Lööf Green, J. (2019). Bridging the gap between theory and design. *International Journal of Sustainability in Higher Education*, *20*(3), 548–567. https://doi.org/10.1108/IJSHE-04-2019-0143

Beringer, A., Wright, T., & Malone, L. (2008). Sustainability in higher education in Atlantic Canada. *International Journal of Sustainability in Higher Education*, *9*(1), 48–67. https://doi.org/10.1108/14676370810842184

365

Bloomberg, L. D., & Volpe, M. F. (2018). *Completing your qualitative dissertation: A road map from beginning to end* (4th ed.). Sage Publication, Inc.

Boettger, T. (2014). Threshold Spaces. In *Threshold Spaces*. Birkhäuser Verlag GmbH,. https://doi.org/10.1515/9783038214007

Bollo, C., & Collins, T. (2017). The Power of Words: Grounded Theory Research Methods in Architecture & Design. *Architectural Research Centers Consortium (ARCC) University of Utah*, 87–94.

Bonner, C., Tuckerman, J., Kaufman, J., Costa, D., Durrheim, D. N., Trevena, L., Thomas, S., & Danchin, M. (2021). Comparing inductive and deductive analysis techniques to understand health service implementation problems: a case study of childhood vaccination barriers. *Implementation Science Communications*, *2*(100). https://doi.org/10.1186/s43058-021-00202-0

Botsaris, P. N., Giourka, P., Papatsounis, A., Dimitriadou, P., Goitia-Zabaleta, N., & Patsonakis, C. (2021). Developing a business case for a renewable energy community in a public housing settlement in greece—the case of a student housing and its challenges, prospects and barriers. *Sustainability (Switzerland)*, *13*(7). https://doi.org/10.3390/su13073792

Breunig, J., Calderón Arias, P. S., Mudavanhu, P., Syal, A., Schulte, B., & Hornecker, E. (2021). Carpet Tiles: Interactive and Modular Carpets to support International Students in Shared Dorms to Feel at Home. In B. Pfleging, D. Kern, & S. Schneegass (Eds.), *Mensch und Computer 2021* (pp. 140–144). ACM. https://doi.org/10.1145/3473856.3473995

Brookfield, K. (2019). Studentified areas as contested heterotopias: Findings from Southampton. *Area*, *51*(2), 350–359. https://doi.org/10.1111/area.12458

Brown, J., Volk, F., & Spratto, E. M. (2019). The Hidden Structure: The Influence of Residence Hall Design on Academic Outcomes. *Journal of Student Affairs Research and Practice*, *56*(3), 267–283. https://doi.org/10.1080/19496591.2019.1611590

Burke, R. L., & Veliz-Reyes, A. (2021). Socio-spatial relationships in design of residential care homes for people living with dementia diagnoses: a grounded theory approach. *Architectural Science Review*, 1–15. https://doi.org/10.1080/00038628.2021.1941749

Cascone, S., & Sciuto, G. (2018). Recovery and reuse of abandoned buildings for student housing: A case study in Catania, Italy. *Frontiers of Architectural Research*, *7*(4), 510–520. https://doi.org/10.1016/j.foar.2018.08.004

Charmaz, K. (2006). *Constructing Grounded Theory*. Sage Publication Ltd.

Charmaz, K. (2014). *Constructing Grounded Theory* (2nd ed.). SAGE Publication Ltd.

Charmaz, K. (2017). The Power of Constructivist Grounded Theory for Critical Inquiry. *Qualitative Inquiry*, *23*(1), 34–45. https://doi.org/10.1177/1077800416657105

Charmaz, K. (2020). "With Constructivist Grounded Theory You Can't Hide": Social Justice Research and Critical Inquiry in the Public Sphere. *Qualitative Inquiry*, *26*(2), 165–176. https://doi.org/10.1177/1077800419879081

Charmaz, K., & Belgrave, L. L. (2019). Thinking About Data With Grounded Theory. *Qualitative Inquiry*, *25*(8), 743–753. https://doi.org/10.1177/1077800418809455

Charmaz, K., & Thornberg, R. (2021). The pursuit of quality in grounded theory. *Qualitative Research in Psychology*, *18*(3), 305–327. https://doi.org/10.1080/14780887.2020.1780357

Corbin, J., & Strauss, A. (2014). *Basics of Qualitative Research Techniques and Procedures for Developing Grounded Theory* (4th ed.). SAGE Publication.

Coulson, J., Roberts, P., & Taylor, I. (2015). *University Planning and Architecture*. Routledge. https://doi.org/10.4324/9781315750774

Creswell, J. W. (2009). *RESEARCH DESIGN Qualitative, Quantitative, and Mixed Methods Approaches* (3rd ed.). SAGE PublicationsSage CA: Los Angeles, CA.

Creswell, J. W. (2013). *Research Design: Pendekatan Kualitatif, Kuantitatif, dan Mixed* (3rd ed.). Pustaka Pelajar.

Daliri Dizaj, M., & Khanghahi, T. H. (2022). Students' residential preferences: a case study is dormitories of University of Mohaghegh Ardabili. *Journal of Asian Architecture and Building Engineering*, *21*(4), 1348–1363. https://doi.org/10.1080/13467581.2021.1941987

Dani, M. U. (2019, May 23). *Hendi: Semarang Layak Disebut sebagai Kota Pelajar | Gaya Hidup*. GATRA. https://www.gatra.com/detail/news/418141/gaya%20hidup/hendi-semarang-layak-disebut-sebagai-kota-pelajar

Darmayanti, T. E. (2016). The Ancestral Heritage: Sundanese Traditional Houses Of Kampung Naga, West Java, Indonesia. In S. N. B. Kamaruzzaman, A. S. B. Ali, N. F. B. Azmi, & S. J. L. Chua (Eds.), *MATEC Web of Conferences* (Vol. 66, p. 00108). EDP Sciences. https://doi.org/10.1051/matecconf/20166600108

Dewiyanti, D., & Kusuma, H. E. (2012). Spaces for Muslims Spiritual Meanings. *Procedia - Social and Behavioral Sciences*, *50*(July), 969–978. https://doi.org/10.1016/j.sbspro.2012.08.098

Diningrat Khan, R., & Wulandari, R. (2017). STUDI KOMPARASI FASILITAS DAN STANDAR ASRAMA DI INDONESIA: Studi Kasus 5 Universitas. *Idealog: Ide Dan Dialog Desain Indonesia*, *1*(2), 193. https://doi.org/10.25124/idealog.v1i2.852

Domingo-Calabuig, D., & Lizondo-Sevilla, L. (2019). Residências De Estudantes Nas Universidades 'Plateglass': Um Estudo Comparativo. *Arquitetura Revista*, *16*(1). https://doi.org/10.4013/arq.2020.161.06

Elfira, M., & Wibawarta, B. (2019). "More like living with it than in it": The modified functions ff Minangkabau Rumah Gadang of West Sumatra, Indonesia. *Global Journal Al-Thaqafah*, *9*(1), 71–78.

Elnagar, E., Munde, S., & Lemort, V. (2021a). Energy efficiency measures applied to heritage retrofit buildings: A simulated student housing case study in vienna. *Heritage*, *4*(4), 3919–3937. https://doi.org/10.3390/heritage4040215

Elnagar, E., Munde, S., & Lemort, V. (2021b). Refurbishment concepts for a student housing at the Otto Wagner Areal in Vienna under the aspects of sustainability, energy efficiency and heritage protection. *IOP Conference Series: Earth and Environmental Science*, *863*(1), 012047. https://doi.org/10.1088/1755-1315/863/1/012047

Faisal, G., & Wihardyanto, D. (2020). Negotiations of vernacular shapes and materials of Talang Mamak Tribal Houses, East Sumatra, Indonesia. *ISVS E-Journal*, *7*(3), 14–26.

Fajariyah, L. (2021). Quranic Values On The Jamik Mosque Architecture In Sumenep. *Journal of Islamic Architecture*, *6*(3), 187–195. https://doi.org/10.18860/JIA.V6I3.9921

Fakriah, N. (2021). Islamic Garden Concept In Bustanussalatin (Garden Of The Kings), Aceh, Indonesia. *Journal of Islamic Architecture*, *6*(3), 196–202. https://doi.org/10.18860/jia.v6i3.10840

Fanggidae, L. W., Yoyok Wahyu Subroto, T., & Nareswari, A. (2019). The persistence of the traditional house's spatial system in the migrant street vendor's stalls. *International Journal of Scientific and Technology Research*, *8*(09), 586–594.

Farraz, M. A., & Barus, L. S. (2019). Housing Preferences and Choice Young Families Commuters in Depok City, Indonesia. *IOP Conference Series: Earth and Environmental Science*, *264*(1), 2–8. https://doi.org/10.1088/1755-1315/264/1/012010

Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. *International Journal of Qualitative Methods*, *5*(1), 80–92. https://doi.org/10.1177/160940690600500107

Firmansyah, R., Ismail, S., Utaberta, N., Yuli, G. N., & Shaari, N. (2020). Student's Perception of Common Rooms in Daarut Tauhid Tahfidz Islamic Boarding School, Bandung. *Proceedings of the EduARCHsia & Senvar 2019 International Conference (EduARCHsia 2019)*. https://doi.org/10.2991/aer.k.200214.012

Firmansyah, R., Shaari, N., Ismail, S., & Utaberta, N. (2020). Learning Model and Islamic Values of Spatial Design To Support Learning Space Model of Pesantren in Indonesia Learning Model and Islamic Values of Spatial Design To Support Learning Space Model of Pesantren in Indonesia. *International Journal of Advanced Science and Technology*, *29*(June), 4779–4787.

Firmansyah, R., Shaari, N., Ismail, S., Utaberta, N., & Usman, I. M. S. (2021a). Observation Of Female Dorm Privacy In Islamic Boarding Schools In West Java, Indonesia. *Journal of Islamic Architecture*, *6*(4), 360–368. https://doi.org/10.18860/jia.v6i4.13091

Firmansyah, R., Shaari, N., Ismail, S., Utaberta, N., & Usman, I. M. S. (2021b). Observation Of Female Dorm Privacy In Islamic Boarding Schools In West Java, Indonesia. *Journal of Islamic Architecture*, *6*(4), 360–368. https://doi.org/10.18860/jia.v6i4.13091

Foroutan, Y. (2017). Muslim Minority of New Zealand in Global Context: Demographic Perspective. *Journal of Muslim Minority Affairs*, *37*(4), 511–519. https://doi.org/10.1080/13602004.2017.1399599

Freewan, A. A., Jaradat, N. M., & Amaireh, I. A. (2022). Optimizing Shading and Thermal Performances of Vertical Green Wall on Buildings in a Hot Arid Region. *Buildings*, *12*(2). https://doi.org/10.3390/buildings12020216

Gaputra, A. D. (2020). Acculturation Elements On Sang Cipta Rasa And Panjunan Red Mosque. *Journal of Islamic Architecture*, *6*(2), 119–126. https://doi.org/10.18860/jia.v6i2.8128

Gibbs, A. (1997). Focus Groups. *Social Research Update*, *9*(19), 1–8.

Gibson, B., & Hartman, J. (2014). *Rediscovering Grounded Theory*. SAGE Publications Ltd. https://doi.org/10.4135/9781529799620

Glasser, B. G., & Strauss, A. L. (2006). *The Discovery of Grounded Theory: strategies for qualitative research*. AldineTransaction.

Groat, L., & Wang, D. (2013). *Architectural Research Methods* (2nd ed.). John Wiley & Sons, Inc.

Gunawan, A., Edison, F. M., Mugnisjah, W. Q., & Utami, F. N. H. (2019). Indonesian cultural landscape diversity: Culture-based landscape elements of minangkabau traditional settlement. *International Journal of Conservation Science*, *10*(4), 701–710.

Halim, A., Basyid, A., & Prihananto. (2021). Religious Identity Transformation: Cultural Interbreeding Between Dayak Indigenous Culture and Islam. *Journal Of Indonesian Islam*, *15*(1), 171–192. https://doi.org/10.15642/JIIS.2021.15.1.171-192

Hamid, A. B. A., Wahab, M. H. A., Alias, A., & Rahmat, N. (2016). Ablution Design: The Concepts and Design Criteria. *Proceedings of the 2nd International Colloquium of Art and Design Education Research (i-CADER 2015)*, 487–496. https://doi.org/10.1007/978-981-10-0237-3_48

Hanan, H. (2012). Modernization and Cultural Transformation: The Expansion of Traditional Batak Toba House in Huta Siallagan. *Proceeding of ASEAN Conference on Environment-Behaviour Studies (AcE-Bs) on Way of Life - Socio-Economic and Cultural Context*, 800–811. https://doi.org/10.1016/j.sbspro.2012.08.082

Hasan, M. I., Murtini, T. W., & Sari, S. R. (2015). The Application of Sustainable Architecture In Islamic University. *Advances in Environmental Biology*, *9*(23), 27–30.

Hassanain, M. A. (2007). Post-Occupancy Indoor Environmental Quality Evaluation of Student Housing Facilities. *Architectural Engineering and Design Management*, *3*(4), 249–256. https://doi.org/10.1080/17452007.2007.9684646

Hastorahmanto, P. S., Soetomo, S., & Sardjono, A. B. (2020). Traditional architecture of Kalang, Limasap (Ethnographic approach). *International Journal of Scientific and Technology Research*, *9*(4), 2468–2475.

Hasyim, M. F., Liliek Channa, A. W., & Mufid, M. (2020). THE WALAGARA MARRIAGE RITUAL: The Negotiation between Islamic Law and Custom in Tengger. *JOURNAL OF INDONESIAN ISLAM*, *14*(1), 139–162. https://doi.org/10.15642/JIIS.2020.14.1.139-162

Hidayat, E. R., Danuri, H., & Purwanto, Y. (2018). ECOMASJID: THE FIRST MILESTONE OF SUSTAINABLE MOSQUE IN INDONESIA. *Journal of Islamic Architecture*, *5*(1), 20. https://doi.org/10.18860/jia.v5i1.4709

Huda, S. A. A., & Ariffaturakhman, T. (2021). Multicultural Education at Al-Mubarok Dormitory Darul Ulum Islamic Boarding School Jombang. *SCHOOLAR: Social and Literature Study in Education*, *1*(1), 54–60.

Humaisi, M. S., Thoyib, M., Arifin, I., Imron, A., & Sonhadji, A. (2019). Pesantren Education and Charismatic Leadership: A Qualitative Analysis Study on Quality Improvement of Islamic Education in Pondok Pesantren Nurul Jadid Paiton, Probolinggo. *Universal Journal of Educational Research*, *7*(7), 1509–1516. https://doi.org/10.13189/ujer.2019.070704

Hwaish, A. N. A. (2016). Concept of The "Islamic House"; A Case Study of the Early Muslim House. *International Journal of Advances in Mechanical and Civil Engineering*, *3*(1).

Idham, N. C. (2018). Javanese vernacular architecture and environmental synchronization based on the regional diversity of Joglo and Limasan. *Frontiers of Architectural Research*, *7*(3), 317–333. https://doi.org/10.1016/j.foar.2018.06.006

Idham, N. C. (2021). Javanese Islamic Architecture: Adoption And Adaptation Of Javanese And Hindu-Buddhist Cultures In Indonesia. *Journal Of Architecture And Urbanism*, *45*(1), 9–18. https://doi.org/10.3846/jau.2021.13709

Imriyanti, I. (2014). Mosque Architecture As A Sustainable Building In Urban (Case Study: Al Markas Al Islamic Mosque Makassar). *Journal of Islamic Architecture*, *2*(4). https://doi.org/10.18860/jia.v2i4.2467

Indrawati, Soetomo, S., Setioko, B., Murtini, T. W., & Nurhasan. (2016). Edu – Religious Tourism Based on Islamic Architecture Approach, a Prelimenary Research in

Majasto Cemetery – Sukoharjo Regency Central Java. *Procedia - Social and Behavioral Sciences*, *227*, 656–663. https://doi.org/10.1016/j.sbspro.2016.06.129

İpekoğlu, B. (2006). An architectural evaluation method for conservation of traditional dwellings. *Building and Environment*, *41*(3), 386–394. https://doi.org/10.1016/j.buildenv.2005.02.009

Izziah, Meutia, E., Sahputra, Z., & Irwansyah, M. (2021). Architecture in between: connecting between traditional Acehnese house and the current condition of modern Acehnese community. *IOP Conference Series: Materials Science and Engineering*, *1087*(1), 012036. https://doi.org/10.1088/1757-899X/1087/1/012036

Ju, S. R., Kim, D. Y., & Santosa, R. B. (2018a). Dualism in the Javanese house and transformation with focus on the houses of Kotagede, Yogyakarta. *Journal of Asian Architecture and Building Engineering*, 71–78. https://doi.org/10.3130/jaabe.17.71

Ju, S. R., Kim, D. Y., & Santosa, R. B. (2018b). Dualism in the Javanese House and Transformation With focus on the houses of Kotagede, Yogyakarta. *Journal of Asian Architecture and Building Engineering*, *17*(1), 71–78. https://doi.org/10.3130/jaabe.17.71

Junara, N., Triyadi, S., & Budi, B. S. (2019). Comparative Studies In Religious Spatial Physical Characteristics In Kampung Kauman Malang, Surakarta, And Pekalongan. *Journal of Islamic Architecture*, *5*(3), 145–150. https://doi.org/10.18860/jia.v5i3.4384

Kameli, M., Fakhri, M., & Mohammadi, M. (2016). Evaluating Girls Students Dormitories With An Emphasis On Comfort And Intimacy. *Ciência e Natura*, *38*(2), 803. https://doi.org/10.5902/2179460x21526

Karim, S. A., Anwar, K. S., Khan, M. A. H., Mollah, M. A. H., Nahar, N., Rahman, H. E. M. R., al Mamun, M., Goni, N., Hossain, M. M., Rahman, M. S., Begum, H.-A.,

& Das, S. K. (2007). Socio-demographic characteristics of children infested with scabies in densely populated communities of residential madrashas (Islamic education institutes) in Dhaka, Bangladesh. *Public Health*, *121*(12), 923–934. https://doi.org/10.1016/j.puhe.2006.10.019

Kermath, B. (2007). Why go native? Landscaping for biodiversity and sustainability education. *International Journal of Sustainability in Higher Education*, *8*(2), 210–223. https://doi.org/10.1108/14676370710726661

Khamdevi, M. (2014). The Fiqh Of The Imam And Congregation Position As Design Guidelines In Designing A Vertical Mosque. *Journal of Islamic Architecture*, *2*(3). https://doi.org/10.18860/jia.v2i3.2461

Khan, F. R. (1978, April). The Islamic Environment: Can the Future Learn from the Past? *Toward an Architecture in the Spirit of Islam*.

Kobue, T., Oke, A., & Aigbavboa, C. (2017). Understanding the Determinants of Students' Choice of Occupancy for Creative Construction. *Creative Construction Conference, CCC 2017*, *196*, 423–428. https://doi.org/10.1016/j.proeng.2017.07.219

Kurniawan, A., & Yuli, N. G. (2021). Transformation of Exclusive to Inclusive Spaces: The Case of Al-Hikmah 2 Benda Islamic Boarding School, Brebes. *Journal of Architectural Research and Design Studies*, *5*(1). https://doi.org/10.20885/jars.vol5.iss1.art2

Kurniawan, K. R., Suhanto, K. A. G., & Angelia, D. P. (2020). From Boluf to Kampung : Spatial Changes in The Korowai Traditional Settlements. *ISVS E-Journal*, *7*(1), 12–20.

Kurniawaty, G., Horlanso, V., Aditama, M. Y., & Larasati, D. (2022). Digital Placemaking and Its Effect to The Architectural Development (Case Study: City of

Dreams, Macau). *IOP Conference Series: Earth and Environmental Science*, *1058*(1), 012021. https://doi.org/10.1088/1755-1315/1058/1/012021

Kusyanto, M., Triyadi, S., & Wonorahardjo, S. (2019). Characterization Of The Community Participation Model In The Mosque Construction Process (Case Study: Construction Of Mosques In Demak Regency). *Journal of Islamic Architecture*, *5*(3), 159–165. https://doi.org/10.18860/jia.v5i3.5791

Lacerda, I. P., & Valentini, F. (2018). Impacto da Moradia Estudantil no Desempenho Acadêmico e na Permanência na Universidade. *Psicologia Escolar e Educacional*, *22*(2), 413–423. https://doi.org/10.1590/2175-35392018022524

Lashley, C. (2008). Studying hospitality: Insights from social sciences. *Scandinavian Journal of Hospitality and Tourism*, *8*(1), 69–84. https://doi.org/10.1080/15022250701880745

Latif, M., & Hafid, E. (2021). multicultural attitudes in an Islamic boarding school of South Sulawesi – Indonesia. *Cogent Education*, *8*(1). https://doi.org/10.1080/2331186X.2021.1968736

Lee, J. S., Pries-Heje, J., & Baskerville, R. (2011). Theorizing in Design Science Research. In *Lecture Notes in Computer Science* (pp. 1–16). Springer. https://doi.org/10.1007/978-3-642-20633-7_1

Lolli, N., & Lien, A. G. (2019). Comfort assessment of two nzebs in norway. *Journal of Sustainable Architecture and Civil Engineering*, *25*(2), 5–15. https://doi.org/10.5755/j01.sace.25.2.22098

Madeali, H., Suhendro, B., Pradipto, E., & Kusumawanto, A. (2018). Construction method and performance of bugis traditional house in wind disasters. *International Journal on Advanced Science, Engineering and Information Technology*, *8*(6), 2406–2412. https://doi.org/10.18517/ijaseit.8.6.5849

Magni, M., Pescaroli, G., & Bartolucci, A. (2019). Factors influencing university students' accommodation choices: risk perception, safety, and vulnerability. *Journal of Housing and the Built Environment*, *34*(3), 791–805. https://doi.org/10.1007/s10901-019-09675-x

Maimun, A., Indiyanto, A., & Mujab, M. (2020). Educating Islamic Values Through Wiwitan Tradition. *Journal Of Indonesian Islam*, *14*(2), 359–386. https://doi.org/10.15642/JIIS.2020.14.2.359-386

Maknun, T., Hasjim, M., Muslimat, M., & Hasyim, M. (2020). The form of the traditional bamboo house in the Makassar culture: A cultural semiotic study. *Semiotica*, *2020*(235), 153–164. https://doi.org/10.1515/sem-2017-0162

Manaf, A. A., Rahim, Z. A., Majid, N. H. A., & Omer, S. (2019). A relook at visual privacy: Definition and factors influencing muslim visual privacy (MVP). *Pertanika Journal of Social Sciences and Humanities*, *27*(4), 2659–2670.

Manurung, P. (2017). Daylighting and architectural concept of traditional architecture: The Tongkonan in Toraja, Indonesia. *A/Z : ITU Journal of Faculty of Architecture*, *14*(1), 111–126. https://doi.org/10.5505/itujfa.2017.65487

Marwazi, & Husnul Abid, M. (2021). Traditional Madrasah, State Policies And The Rise Of Integrated Islamic Schools In Jambi. *Journal Of Indonesian Islam*, *15*(1), 75–102. https://doi.org/10.15642/JIIS.2021.15.1.75-102

McCann, L., Hutchison, N., & Adair, A. (2020). Student residences: time for a partnership approach? *Journal of Property Investment and Finance*, *38*(2), 128–146. https://doi.org/10.1108/JPIF-11-2019-0140

McCartney, S., & Rosenvasser, X. (2022). Privacy Territories in Student University Housing Design: Introduction of the Hierarchy of Isolation and Privacy in

Architecture Tool (HIPAT). *SAGE Open*, *12*(2). https://doi.org/10.1177/21582440221089953

Michalopoulos, S., Naghavi, A., & Prarolo, G. (2018). Trade and Geography in the Spread of Islam. *The Economic Journal*, *128*(616), 3210–3241. https://doi.org/10.1111/ecoj.12557

Moleong, L. J. (2011). *Metodologi penelitian kualitatif*. Remaja Rosdakarya.

Mortada, H. (2003). *Traditional Islamic Principles of Built Environment* (1st ed.). Routledge.

Mubarok, J., Mutiara, E., & Setiyowati, E. (2018). Extending Tradition Concept Of Tahfidz Islamic Boarding School Design In Nganjuk Indonesia. *Journal of Islamic Architecture*, *5*(2), 96–102. https://doi.org/10.18860/jia.v5i2.4778

Muchlis, A. F., Larasati, D., & Triyadi, S. (2019). Identifying Islamic Values On Green Architectural Concept: Quantitative Approaches To Content Analysis. *Journal of Islamic Architecture*, *5*(4), 221–228. https://doi.org/10.18860/jia.v5i4.7568

Murray-Davis, B., Grenier, L. N., Plett, R. A., Mattison, C. A., Ahmed, M., Malott, A. M., Cameron, C., Hutton, E. K., & Darling, E. K. (2023). Making Space for Midwifery in a Hospital: Exploring the Built Birth Environment of Canada's First Alongside Midwifery Unit. *HERD: Health Environments Research & Design Journal*, *16*(2), 189–207. https://doi.org/10.1177/19375867221137099

Mustafa, M., Yudono, A., Wikantari, R., & Harisah, A. (2016). Identifying Islamic Values in The Embodiment of Makassar Traditional Houses in Barombong Coastal. *Proceedings of Engineering and Technology Innovation*, *2*, 20–22. https://doi.org/10.46604/PETI.2016.224

Mustafa, M., Yudono, A., Wikantari, R., & Harisah, A. (2018). Implementation of islamic values in houses around darul istiqamah islamic boarding school in Maccopa, Maros. *Pertanika Journal of Social Sciences and Humanities*, *26*(4), 2731–2746.

Naing, N., & Hadi, K. (2020). Vernacular architecture of buginese: The concept of local-wisdom in constructing buildings based on human anatomy. *International Review for Spatial Planning and Sustainable Development*, *8*(3), 1–15. https://doi.org/10.14246/irspsda.8.3_1

Najib, N. M., Yusof, N., & Tabassi, A. A. (2018). Service quality performance of student housing: The effects on students' behavioural intentions. *IEEE Student Conference on Research and Development: Inspiring Technology for Humanity*, 204–209. https://doi.org/10.1109/SCORED.2017.8305393

Najib, N. U. M., Yusof, N. A., & Tabassi, A. A. (2015). Living in On-campus Student Housing: Students' Behavioural Intentions and Students' Personal Attainments. *Procedia - Social and Behavioral Sciences*, *170*, 494–503. https://doi.org/10.1016/j.sbspro.2015.01.052

Napitupulu, N., Aritonang, E., & Silitonga, S. (2020). The Study about the Comparation between Batak Toba Traditional House in Huta Raja Samosir and Lumban Binanga Toba Samosir. *IOP Conference Series: Earth and Environmental Science*. https://doi.org/10.1088/1755-1315/452/1/012052

Neuman, D. J. (2013). *Building Type Basic for College and University Facilities* (2nd ed.). John Wiley & Sons, Inc.

Noaime, E., Osman, A., Said, M. A., Abdullah, G., Touahmia, M., Nasser, Y., Salah, K., & Hassan, M. (2020). A Short Review of Influencing Factors of Islamic Architecture in Aleppo , Syria. *Engineering Technology & Applied Science Research*, *10*(3), 5689–5693.

Nu'Man, S. (2016). A unified architectural theory for islamic architecture. *Archnet-IJAR*, *10*(3), 100–112. https://doi.org/10.26687/archnet-ijar.v10i3.973

Nuraeny, E., Susanto, D., & Kurniawan, K. R. (2018). Preliminary Study in Finding Alternative Materials: A Study on Traditional Malay Stage-House Typology and Construction in Bangka Island. In E. Kusrini, F. H. Juwono, A. Yatim, & E. A. Setiawan (Eds.), *Proceeding of 3rd International Tropical Renewable Energy Conference on Sustainable Development of Tropical Renewable Energy (i-TREC)* (p. 04018). E3S Web of Conferences. https://doi.org/10.1051/e3sconf/20186704018

Nuriman, & Fauzan. (2017). The Influence of Islamic Moral Values on the Students' Behavior in Aceh. *Dinamika Ilmu*, *17*(2), 275. https://doi.org/10.21093/di.v17i2.835

Nurjani, N. P. S. (2020). How Traditional Balinese Houses Can Adjust and Cater for International Tourist in the Canggu Area, Bali Indonesia? *International Journal of Psychosocial Rehabilitation*, *24*(3), 2561–2573. https://doi.org/10.37200/IJPR/V24I3/PR201901

Nuryanto, N., Dwijendra, N. ketut A., Puturusi, S. A., & Andhika, I. M. (2021). Technic and Mystics of Tukang Wangunan in Sundanese Traditional Houses in Indonesia (Case Study : Baduy Tribe Community-Banten). *Civil Engineering and Architecture*, *9*(2), 533–544. https://doi.org/10.13189/cea.2021.090226

Olanrewaju, S. D., Adetunji, O. S., & Ogundepo, T. M. (2019). Achieving Energy Efficient Building through Energy Performance Analysis of Building Envelope in Student Housing. *3rd International Conference on Engineering for Sustainable World, ICESW 2019*, *1378*(4). https://doi.org/10.1088/1742-6596/1378/4/042023

Omer, S. (2008). Towards Understanding Islamic Architecture. *Islamic Studies*, *47*(4), 483–510. https://www.jstor.org/stable/20839141?seq=1

Omer, S. (2009). *Islamic Architecture Its Philosophy Spiritual Significance & Some Early Developments*. A.S. Noordeen.

Omer, S. (2010a). *Islam & Housing*. A.S. Noordeen.

Omer, S. (2010b). Some Lessons from Prophet Muhammad (SAW) in Architecture: The Prophet's Mosque in Madīnah | Intellectual Discourse. *INTELLECTUAL DISCOURSE*, *18*(1). https://journals.iium.edu.my/intdiscourse/index.php/id/article/view/140

Omer, S. (2019). *History and Theory of Islamic Architecture*. IIUM Press.

Othman, Z. (2016). *Privacy, modesty, hospitality and the design of Muslim homes in Australia*. Queensland University of Technology.

Othman, Z., Aird, R., & Buys, L. (2015). Privacy, modesty, hospitality, and the design of Muslim homes: A literature review. *Frontiers of Architectural Research*, *4*(1), 12–23. https://doi.org/10.1016/j.foar.2014.12.001

Ovan, T. H. (2021). (Re)-Interpretation Of The Paer Space Concept An Environmental Pattern Approach Through A Multilevel. *Journal of Islamic Architecture*, *6*(4), 237–250. https://doi.org/10.18860/jia.v6i4.10910

PUPR, B. K. P. K. (2020, June 9). *Dukung SDM Unggul, Kementerian PUPR Bangun 34 Tower Rusun Ponpes dan Pendidikan Tinggi Tahun 2020*. Berita PUPR. https://www.pu.go.id/berita/view/18351/dukung-sdm-unggul-kementerian-pupr-bangun-34-tower-rusun-ponpes-dan-pendidikan-tinggi-tahun-2020

Purbadi, Y. D., Lake, R. C., & Arinto, F. X. E. (2020). The Symbolic Regionalism on The Architectural Expression Design of Kupang Town-Hall. *Journal of Design and Built Environment*, *20*(3), 71–84.

Puspitasari, C. (2019). Cultural Resilience In Kampung Mahmud As An Effort To Preserve Historic Area. *Journal of Islamic Architecture*, *5*(3), 151–158. https://doi.org/10.18860/jia.v5i3.5031

Putra, I. D. G. A. D. (2020). "Stay at home" for addressing COVID-19 protocol: learning from the traditional Balinese house. *Archnet-IJAR: International Journal of Architectural Research*, *15*(1), 64–78. https://doi.org/10.1108/ARCH-09-2020-0187

Putra, I. D. G. A. D., Adhika, I. M., & Yana, A. A. G. A. (2021). Reviving Cultural Tourism in Kendran Bali Indonesia: Maintaining Traditional Architecture and Developing Community-based Tourism. *Civil Engineering and Architecture*, *9*(2), 328–338. https://doi.org/10.13189/cea.2021.090206

Putra, I. D. G. A. D., Lozanovska, M., & Fuller, R. (2019). From Spiritualistic Toward More Pragmatic Pattern: Re-Ordering Balinese Houses And Viability Of The Household Traditions In Tourism Economy. *Journal Of Architecture And Urbanism*, *43*(1), 47–61. https://doi.org/10.3846/jau.2019.3692

Putri, R. H. (2014). Implementation Of Hijab Concept In Arab House Pasar Kliwon Surakarta. *Journal of Islamic Architecture*, *2*(3). https://doi.org/10.18860/jia.v2i3.2465

Putrie, Y. E., Martokusumo, W., & Budi, B. S. (2018). Maintaining Or Negotiating Identity: The Socio-Political Dynamics Of Community Mosques In Malang, East Java, Indonesia. *Journal of Islamic Architecture*, *5*(1), 45. https://doi.org/10.18860/jia.v5i1.4431

Putrie, Y. E., Martokusumo, W., & Budi, B. S. (2020). Defending Spaces, Preventing Conflicts: The Politics of Identity Representation in the Nahdliyin Mosques in

Malang Raya. *Journal Of Indonesian Islam*, *14*(1), 26–50. https://doi.org/10.15642/JIIS.2020.14.1.26-50

Putro, J. D., & Zain, Z. (2021). Active and Passive Adaptation of Floating Houses (Rumah Lanting) to the Tides of the Melawi River in West Kalimantan , Indonesia. *Geographica Pannonica*, *25*(2), 72–84. https://doi.org/10.5937/gp25-30422

Rahmadina, A., & Lukito, Y. N. (2020a). Continuity and adaptation of veranda from traditional betawi house to modern house design. *4th International Tropical Renewable Energy Conference (i-TREC) - Sustainable Energy and Environment for Tropical Climate*, 070015. https://doi.org/10.1063/5.0015010

Rahmadina, A., & Lukito, Y. N. (2020b). Continuity and adaptation of veranda from traditional betawi house to modern house design. *AIP Conference Proceedings*, *2255*(September). https://doi.org/10.1063/5.0015010

Raka, A. A. G., & Runa, I. W. (2018). Changes in Rural Settlement to Improve Ancient Villages Conservation Quality in Bali-Indonesia. *IOP Conference Series: Materials Science and Engineering*, *434*(1), 012224. https://doi.org/10.1088/1757-899X/434/1/012224

Rasdi, M. T. H. M. (2008). Reconstructing the idea of Islamic architecture: Restructuring the academic framework and design approach within the perspective of the Sunnah. *Journal of Architecture*, *13*(3), 297–315. https://doi.org/10.1080/13602360802216948

Ratunar Rahmatulloh, O., Purwani, O., & Rahayu, P. (2020). The Consumption of Tradition and Heritage Areas in the Grebeg Sudiro Event in Surakarta. *International Journal of Built Environment and Sustainability*, *7*(3), 49–58. https://doi.org/10.11113/ijbes.v7.n3.548

383

Reynolds, C. L. (2020). The effect of dormitory residence during college on student outcomes. *Journal of Human Capital*, *14*(2), 249–289. https://doi.org/10.1086/709534

Rozan, N., Setiyowati, E., & Wismantara, P. P. (2014). THE APPLICATION OF ISLAMIC VALUE AND REGIONALISM IN THE REDESIGN OF ZAINUL HASAN GENGGONG BOARDING SCHOOL IN PROBOLINGGO INDONESIA. *Journal of Islamic Architecture*, *2*(3). https://doi.org/10.18860/jia.v2i3.2460

Rukayah, R. S., Syafei, W. A., Abdullah, M., & Etenia, A. (2021). The Diversity of Multi-ethnic Dutch Area Corridors Leading to the City Square of Semarang, Indonesia. *ISVS E-Journal*, *8*(1), 1–22.

Sadaka, N., Hanazato, S., Hanazato, T., Uekita, Y., Nitto, K., Sato, K., Ono, K., Yoyok, S., Diananta, P., & Pradipt, E. (2013). Architectural Structural Survey of Groups of Traditional Timber Houses in South Nias, Indonesia. *Advanced Materials Research*, *778*, 74–81. https://doi.org/10.4028/www.scientific.net/AMR.778.74

Sage, J., Smith, D., & Hubbard, P. (2012). The Diverse Geographies of Studentification: Living Alongside People Not Like Us. *Housing Studies*, *27*(8), 1057–1078. https://doi.org/10.1080/02673037.2012.728570

Salura, P., Clarissa, S., & Lake, R. C. (2020). Reflecting the Spirit of Modern-Indonesia Through Architecture: The Icono-Symbolical Meanings of Jengki Architectural Style Case Studies: Bandung Polytechnic of Health Building and Bumi Sangkuriang Meeting Hall in Bandung, West Java, Indonesia. *Journal of Design and Built Environment*, *20*(2), 13–26.

Samra, B., & Imbardi, I. (2020). Exploring Architectural Design of Istana Siak Sri Indrapura: The wisdom and environmental knowledges. *IOP Conference Series: Earth and Environmental Science*. https://doi.org/10.1088/1755-1315/469/1/012069

Sanderson, D., & Özogul, S. (2022). Key investors and their strategies in the expansion of European student housing investment. *Journal of Property Research*, *39*(2), 170–196. https://doi.org/10.1080/09599916.2021.1993315

Sanni-Anibire, M. O., & Hassanain, M. A. (2016). Quality assessment of student housing facilities through post-occupancy evaluation. *Architectural Engineering and Design Management*, *12*(5), 367–380. https://doi.org/10.1080/17452007.2016.1176553

Santosa, R. B. (2019). *OMAH Membaca Makna Rumah Jawa* (R. B. Santosa, Ed.; 1st ed.). RAW.

Saputra, A., & Rochis, M. (2014). Adaptation Strategy Of Mosque Architecture In The Minority Neighborhood Case Studies: Mosques in Denpasar City and Badung Regency, Province of Bali. *Journal of Islamic Architecture*, *3*(2), 49. https://doi.org/10.18860/jia.v3i2.2540

Sargisson, R. J. (2018). Do parking fees affect commuting choices of staff and students on a university campus? *International Journal of Transport Development and Integration*, *2*(2), 189–201. https://doi.org/10.2495/TDI-V2-N2-189-201

Sari, D. P., & Chiou, Y. S. (2019). Transformation in architecture and spatial organization at Javanese house. *Proceedings of the 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining, ASONAM 2019*, 570–577. https://doi.org/10.1145/3341161.3343684

Sari, I. kartika, Nuryanti, W., & Ikaputra. (2019). The meaning of home: Privacy, modesty and hospitality in traditional Malay house, West Borneo, Indonesia. *ISVS E-Journal*, *6*(1), 22–31.

Satola, D., Kristiansen, A. B., Houlihan-Wiberg, A., Gustavsen, A., Ma, T., & Wang, R. Z. (2020). Comparative life cycle assessment of various energy efficiency designs

of a container-based housing unit in China: A case study. *Building and Environment*, *186*, 107358. https://doi.org/10.1016/j.buildenv.2020.107358

Sebastian, K. (2019). Distinguishing Between the Types of Grounded Theory: Classical, Interpretive and Constructivist. *Journal for Social Thought*, *3*(1). https://ojs.lib.uwo.ca/index.php/jst/index

Sedayu, A. (2019). Optimization model of performance factor of green and smart building in islamic boarding school. *IOP Conference Series: Earth and Environmental Science*. https://doi.org/10.1088/1755-1315/243/1/012121

Setiadi, A., & Depari, C. D. A. (2021). The Transformation Of Residential Spatial And Form In Kauman Village Yogyakarta. *Journal of Islamic Architecture*, *6*(4), 286–300. https://doi.org/10.18860/jia.v6i4.11665

Setiyani, W. (2020). The Exerted Authority Of Kiai Kampung In The Social Construction Of Local Islam. *Journal Of Indonesian Islam*, *14*(1), 51–76. https://doi.org/10.15642/JIIS.2020.14.1.51-76

Shelby, J., Lindsay, G., & Derr, C. (2022). Contested identities, contested building: planning for a glocal future. *Archnet-IJAR: International Journal of Architectural Research*, *16*(3), 671–687. https://doi.org/10.1108/ARCH-09-2021-0257

Shestopalets, D. (2021). Between faith and ethnicity: motifs of conversion and attitudes to ethnic Muslims in the discourses of Russian converts to Islam. *Contemporary Islam*, *15*(3), 357–380. https://doi.org/10.1007/s11562-021-00474-2

Siahaan, F. (2020). Identification of Application of Biological Architecture in the North Nias's Traditional House "Omo Hada" in Indonesia. *IOP Conference Series: Earth and Environmental Science*, *452*, 012016. https://doi.org/10.1088/1755-1315/452/1/012016

Simpeh, F., & Akinlolu, M. (2021). A comparative analysis of the provision of student housing safety measures. *Journal of Facilities Management*, *19*(3), 377–392. https://doi.org/10.1108/JFM-11-2020-0080

Sintang, S., Hambali, K., Baharudin, A., & Ahmad, M. (2011). Interfaith Marriage And Religious Conversion:A Case Study Of Muslim Converts In Sabah, Malaysia. In C. Dan (Ed.), *Proceeding of 2nd International Conference on Behavioral, Cognitive and Psychological Sciences (BCPS 2011)* (pp. 173–179). Behavioral, Cognitive And Psychological Sciences.

Smith, C. (2003). Living at work: Management control and the dormitory labour system in China. *Asia Pacific Journal of Management*, *20*(3), 333–358. https://doi.org/10.1023/A:1024097432726

Söderberg, I.-L., Wester, M., & Jonsson, A. Z. (2022). Exploring Factors Promoting Recycling Behavior in Student Housing. *Sustainability (Switzerland)*, *14*(7). https://doi.org/10.3390/su14074264

Spahic Omer. (2022). *The Qur'an on Art Architecture and Built Environment*. IIUM Press and Unissa Press.

Spencer, R., Pryce, J. M., & Walsh, J. (2014). Philosophical Approaches to Qualitative Research. In patricia Leavy (Ed.), *The Oxford Handbook of Qualitative Research* (p. 81). Oxford University Press.

Stephens, J. C., Hernandez, M. E., Román, M., Graham, A. C., & Scholz, R. W. (2008). Higher education as a change agent for sustainability in different cultures and contexts. *International Journal of Sustainability in Higher Education*, *9*(3), 317–338. https://doi.org/10.1108/14676370810885916

Stephenson, M. L. (2014). Deciphering 'Islamic hospitality': Developments, challenges and opportunities. *Tourism Management*, *40*, 155–164. https://doi.org/10.1016/j.tourman.2013.05.002

Subroto, T. Y. W., & Malangyudo, A. S. (2014). City , Culture and Society The continuity of binary diametric space of Balinese house in Yogyakarta , Indonesia. *City, Culture and Society*, *5*(1), 33–42. https://doi.org/10.1016/j.ccs.2014.02.001

Sudjak, S., Asiyah, U., & Prasetyo, R. A. (2017). The Role of Islamic Boarding School as Socialization Agent of Ecological Values (A Case Study in Salaf-Modern Islamic Boarding School) View project. *Wacana*, *20*(4). https://www.researchgate.net/publication/317088682

Sudrajad, R. A., & Wibisono, B. H. (2021). Spatial Patterns Of Islamic Religious Activities In Krapyak District, Yogyakarta. *Journal of Islamic Architecture*, *6*(4), 301–312. https://doi.org/10.18860/jia.v6i4.12575

Suhandjati, S., & Hadikusuma, H. (2018). Reinterpretation of women's domestic roles saleh darat's thought on strengthening women's roles in Indonesia. *JOURNAL OF INDONESIAN ISLAM*, *12*(2), 195–218. https://doi.org/10.15642/JIIS.2018.12.2.195-218

Suharto, M. F., Kawet, R. S. S. I., & Tumanduk, M. S. S. S. (2018a). A Comparative Study of the Traditional Houses Kaili and Bugis-Makassar in Indonesia. *IOP Conference Series: Materials Science and Engineering*, *306*(1), 012077. https://doi.org/10.1088/1757-899X/306/1/012077

Suharto, M. F., Kawet, R. S. S. I., & Tumanduk, M. S. S. S. (2018b). A Comparative Study of the Traditional Houses Kaili and Bugis-Makassar in Indonesia. *Proceeding Of 2nd International Conference On Innovation In Engineering And Vocational Education*, 012077. https://doi.org/10.1088/1757-899X/306/1/012077

Sukesi, & Akbar Hidayat, W. G. P. (2019). Managing The Halal Industry And The Purchase Intention Of Indonesian Muslims: The Case of Wardah Cosmetics. *JOURNAL OF INDONESIAN ISLAM*, *13*(1), 200–229. https://doi.org/10.15642/JIIS.2019.13.1.200-229

Suprapti. (2014). The Tradition Of Living Of Muslim Community Kuduskulon. *Journal of Social Sciences*, *10*(2), 63–73. https://doi.org/10.3844/jssp.2014.63.73

Suprapti, A., Kim, S., Pandelaki, E. E., & Firmandhani, S. W. (2018). A spatial dialogue of heritage village between kauman in Semarang and Seochon in Seoul toward preservation development. *Journal of Architecture and Urbanism*, *42*(1), 16–23. https://doi.org/10.3846/jau.2018.1478

Suprapti, A., Kistanto, N. H., Pandelaki, E. E., & Indrosaptono, D. (2017). Control of spatial protection in Kauman Semarang. *Journal of Architecture and Urbanism*, *41*(4), 268–277. https://doi.org/10.3846/20297955.2017.1402717

Supriyanta, S., & Malik, I. (2016). Islamic Values in Spatial Function of Javanese Traditional Architecture. *Journal of Islamic Architecture*, *3*(4), 189. https://doi.org/10.18860/jia.v3i4.3093

Susilo, G. E., & Nalaralagi, A. (2015). Design of environmental friendly building based on the local wisdom philosophy of sumatera traditional house. *Jurnal Teknologi*. https://doi.org/10.11113/jt.v77.6700

Sutrisno, M., Sastrosasmito, S., & Sarwadi, A. (2019). Posi Bola Of Jami Mosque As Spatial Transformation Symbol. *Journal of Islamic Architecture*, *5*(4), 181–188. https://doi.org/10.18860/jia.v5i4.5226

Swasto, D. F. (2018). Vertical Living Opportunities and Challenges for Low-income People in Southeast Asia Case of Indonesia. *KnE Social Sciences*, *3*(5), 130. https://doi.org/10.18502/kss.v3i5.2330

Swearingen White, S. (2003). Sustainable campuses and campus planning. Experience from a classroom case study at the University of Kansas. *International Journal of Sustainability in Higher Education*, *4*(4), 344–356. https://doi.org/10.1108/14676370310497561

Syarif, Z., Mughni, S. A., & Hannan, A. (2021). Responses Of Pesantrens In Madura Towards The Covid-19 Pandemic. *Journal Of Indonesian Islam*, *15*(1), 47–74. https://doi.org/10.15642/JIIS.2021.15.1.47-74

Tackx, E., Nguyen, P., & Heylighen, A. (2022). Student Life on the Autism Spectrum: Exploring the Role of Student Housing in Experiences of Three Students. *Journal of Interior Design*. https://doi.org/10.1111/joid.12227

Tafliha, I. N. (2020). Landscape Evaluation Of Mosque Garden Based On The Concept Of Islam. *Journal of Islamic Architecture*, *6*(2), 112–118. https://doi.org/10.18860/jia.v6i2.8028

Thahir, M. (2014). The Role and Function of Islamic Boarding School: An Indonesian Context. *Tawarikh*, *5*(2), 197–208.

Thomsen, J. (2007). Home experiences in student housing: About institutional character and temporary homes. *Journal of Youth Studies*, *10*(5), 577–596. https://doi.org/10.1080/13676260701582062

Trisno, R., Claudia, K., & Lianto, F. (2020). Spiritual architecture in the context of Java. *ISVS E-Journal*, *7*(3), 40–48.

Udin, M. S., & Hakim, L. (2020). The fuzzy sacredness aura and cyber-based da'wah redrawing karamah of tuan guru within the belief system of sasak muslims. *Journal Of Indonesian Islam*, *14*(2), 457–476. https://doi.org/10.15642/JIIS.2020.14.2.457-476

Utari, R., Sutapa, M., & Rahmawati, T. (2014). Pembentukan Iklim Sosial-Akademik Di Asrama Mahasiswa. *Jurnal Penelitian Humaniora*, *19*(1).

Vann Ward, T., Morse, J. M., & Charmaz, K. (2023). Medication as a social prosthesis: People with Parkinson's negotiating medication. *SSM - Qualitative Research in Health*, *4*, 100283. https://doi.org/10.1016/j.ssmqr.2023.100283

Verhetsel, A., Kessels, R., Zijlstra, T., & van Bavel, M. (2017). Housing preferences among students: collective housing versus individual accommodations? A stated preference study in Antwerp (Belgium). *Journal of Housing and the Built Environment*, *32*(3), 449–470. https://doi.org/10.1007/s10901-016-9522-5

Winarni, S., Pangarsa, G. W., Antariksa, A., & Wulandari, L. D. (2014). COMMUNAL SPACE IN ISLAMIC ACTIVITY OF DUKUH KRAJAN, DESA KROMENGAN,KABUPATEN MALANG. *Journal of Islamic Architecture*, *2*(3). https://doi.org/10.18860/jia.v2i3.2463

Wiryomartono, B. (2014). Perspectives on Traditional Settlements and Communities. In *Perspectives on Traditional Settlements and Communities*. https://doi.org/10.1007/978-981-4585-05-7

Wismantara, P. P. (2012). The Dynamics Of The Form Of Nusantara Mosque: Architectural Homogeneity Vis A Vis Architectural Hybridity. *Journal of Islamic Architecture*, *2*(1). https://doi.org/10.18860/jia.v2i1.2101

Wiyatasari, R. R., Firmansyah, R., & Hanafiah, U. I. M. (2022). Supporting Facilities of Dormitory Room at Modern Islamic Boarding Schools. *Pendhapa*, *13*(2), 1–6.

Xuan, M., Yazdanpanah, S., & Kim, J.-H. (2020). *Journal of Asian Architecture and Building Engineering Public rental housing ownership conversion based on housing affordability in China Public rental housing ownership conversion based on housing affordability in China*. https://doi.org/10.1080/13467581.2020.1722675

Yanni, C. (2019). *Living on Campus, An Architectural History of the American Dormitory* (1st ed., Vol. 1). University of Minnesota Press.

Yatmo, Y. A., & Atmodiwirjo, P. (2013). Spatial strategies for domestic service activities in urban kampung houses. *International Journal of Technology*, *4*(1), 24–33. https://doi.org/10.14716/ijtech.v4i1.1224

Yilmaz, O., Talavera, O., & Jia, J. Y. (2022). Rental Market Liquidity, Seasonality, and Distance to Universities. *International Journal of the Economics of Business*, *29*(2), 223–239. https://doi.org/10.1080/13571516.2022.2033078

Yuan, J., Zheng, X., You, J., & Skibniewski, M. J. (2017). Identifying critical factors influencing the rents of public rental housing delivery by PPPs: The case of Nanjing. *Sustainability (Switzerland)*, *9*(3). https://doi.org/10.3390/su9030345

Yusof, Z. B. (2011). ISLAMIC GUIDING PRINCIPLE (SHARI'AH LAW) FOR ARCHITECTURAL INTERPRETATION OF HOUSING. In M. Rashid (Ed.), *Islam and Built Environment* (1st ed., pp. 19–33). IIUM Press.

Zain, Z., & Andi, U. F. (2020). The intangible characteristics of the two indigenous traditional dwellings in West Kalimantan. *A/Z : ITU Journal of Faculty of Architecture*, *17*(1), 25–36. https://doi.org/10.5505/itujfa.2019.97720

Zamora i Mestre, J.-L. (2019). El alojamiento universitario: una oportunidad social y un reto para el sector de la arquitectura. *ACE: Architecture, City and Environment*, *14*(40), 261–274. https://doi.org/10.5821/ace.14.40.6772